The Wisconsin Plan for Heart Disease and Stroke Prevention 2005-2009

Created by the
Department of Health
and Family Services,
Division of Public Health,
Cardiovascular Health Program,
and the Cardiovascular Health Alliance

March 2005

Acknowledgments

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State of Wisconsin
Department of Health and Family Services

Jim Doyle, Governor
Helene Nelson, Secretary

April 2005

Dear Cardiovascular Health Partner,

The *Wisconsin Plan for Heart Disease and Stroke Prevention 2005-2009* is a landmark achievement toward the advancement of cardiovascular health in our state. The plan represents an extraordinary level of collaboration among statewide partners to improve the health of Wisconsin residents—those living with heart disease as well as the general population at risk for heart disease and stroke. Our hope is that this plan is widely embraced as a guide for each of us who work and strive to reduce the burden of heart disease and stroke in Wisconsin.

The intent of the *Wisconsin Plan for Heart Disease and Stroke Prevention 2005-2009* is to:

- Increase awareness of what can be done to prevent risk factors for heart disease and stroke.
- Encourage the design of culturally appropriate activities that support heart healthy lifestyles and behaviors, and prevent additional heart attacks or strokes in those who have already had one.
- Focus partners on proven interventions that are practical, achievable, and realistic for persons who have or are at risk for heart disease and stroke.
- Assist all state partners in meeting objectives suggested in *Healthy People 2010,* Chapter 12, and *Healthiest Wisconsin 2010.*

Many organizations in Wisconsin are already doing excellent work to improve heart health, but these efforts often occur in isolation. The *Wisconsin Plan for Heart Disease and Stroke Prevention 2005-2009* offers a unified vision and framework for Wisconsin organizations to mobilize around. It presents common goals for health promotion, advocacy and public policy, epidemiology and surveillance, health systems and organizations, and population-based community interventions. The success of this plan will require the concerted effort of many using different creative solutions to change infrastructure, personal and group behavior, and policies.

This is a call to action! We encourage everyone to take a part in improving heart health in Wisconsin. The changes in our understanding and approach to preventing and treating heart disease and stroke are dynamic. There is a great deal to do. Many partners are committ ed to reducing heart disease in Wisconsin and their efforts will continue, but others are encouraged to become involved. We need your help in spreading the message that heart disease and stroke are mostly preventable. With a united effort, Wisconsin, like many other states, can successfully reduce the burden of heart disease and stroke.

Sincerely,

Helene Nelson, Secretary
Department of Health & Family Services

Charles McCauley, MD & F. Javier Nieto, MD
Co-Chairs
Wisconsin Cardiovascular Health Alliance

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Photograph: Wisconsin Department of Tourism

Introduction

Heart disease and stroke – the main components of cardiovascular disease (CVD) – are the leading causes of death for men and women in the United States and in Wisconsin. About 950,000 Americans die of cardiovascular disease each year, which amounts to one death every 33 seconds[1]. In 2003, 34% (16,842) of all deaths in Wisconsin were due to cardiovascular disease – more than deaths from cancer, automobile crashes, suicide, homicide, and AIDS combined.[2] Cardiovascular deaths included those due to ischemic (coronary) heart disease, stroke (cerebrovascular disease), congestive heart failure (CHF), hypertension (HTN), and atherosclerosis.

Table 1: Major Cardiovascular Disease (CVD) Deaths, by Category, Wisconsin, 2003

Disease Category	Number of deaths		% of CVD Deaths
Major Cardiovascular Disease		16,842	100%
Diseases of the Heart		12,460	74.0%
Ischemic (coronary) Heart Disease	8,179		48.6%
Hypertensive Heart Disease	534		3.2%
Congestive Heart Failure	1,414		8.4%
Other Diseases of the Heart	2,333		13.9%
Primary Hypertension/Hypertensive Renal Disease		379	2.3%
Cerebrovascular Disease (Stroke)		3,204	19.0%
Atherosclerosis		186	1.1%
Other Diseases of the Circulatory System		613	3.6%

Source: Wisconsin DHFS, DPH, Bureau of Health Information and Policy. *Wisconsin Deaths, 2003* (PPH 5368-03). October 2004.

In the United States, one out of two males and one out of three females aged 40 years and under will develop heart disease and stroke sometime in their lifetime.[3] Many of the following risk factors for heart disease and stroke can be prevented or modified:

- physical inactivity
- high blood pressure (hypertension)
- high cholesterol
- poor diet
- excess weight and obesity
- cigarette smoking, and
- diabetes.

Introduction

However, these risk factors have become commonplace among Americans. In the United States, over 80% of Americans have at least one major risk factor for heart disease and stroke or a related condition.[4] The increase in obesity, inactive lifestyles, diabetes, and high cholesterol is leading to earlier onset of heart disease, affecting a large share of young adults.

Given the scale of its impact, heart disease and stroke have become a public health priority in the United States and Wisconsin. In recent years, Congress approved funding to start national, state-based heart disease and stroke prevention programs to help state health departments lead communities and organizations in promoting cardiovascular health. Through this effort, the Wisconsin Department of Health and Family Services applied for a federal grant to form a Cardiovascular Health Program (CVHP) in the Division of Public Health. The CVH program is currently one of 28 programs of its kind that is overseen by the U.S. Centers for Disease Control and Prevention (CDC).[1]

Since its beginning in 2002, the Wisconsin Cardiovascular Health Program Program has:

- developed a staff and infrastructure to support cardiovascular health activities.
- gathered data on the impact of heart disease and stroke in Wisconsin.
- distributed cardiovascular disease clinical adult guidelines as part of the Cardiovascular Risk Reduction Initiative (Appendix A).
- worked with other DHFS health promotion programs, e.g., the Wisconsin Nutrition and Physical Activity Program (WINPA), the Stroke Committee, the Diabetes Prevention and Control Group, and the Arthritis Program on projects and programs to improve CVD health.
- organized the independently governed CVH Alliance, a coalition of groups committed to promoting cardiovascular health.
- created this plan in cooperation with the CVH Alliance.

With an infrastructure, surveillance, and partners in place, the state is prepared to lead stakeholders and partners in a joint plan to improve heart health for the people of Wisconsin.

The purpose of the *Wisconsin Plan for Heart Disease and Stroke Prevention 2005-2009* is to provide a blueprint for organizations, communities, and individuals to work together on actions that can reduce the risks, disability, and death related to cardiovascular disease. By working together, we can take action steps that may reduce or delay the impact of heart disease and stroke and improve quality of life for people in Wisconsin already living with cardiovascular disease.

The Impact of Heart Disease and Stroke in Wisconsin

Photograph: Wisconsin Department of Tourism, Andy Kraushaar

The Impact of Heart Disease and Stroke in Wisconsin

In 2003, cardiovascular disease accounted for almost 34% (16,842) of all deaths in Wisconsin. Age-adjusted death rates (see Glossary) for coronary heart disease (CHD) were disproportionately higher among American Indians, African American females, and in sparsely populated northern counties in the state (see Data Tables). African Americans, American Indian females, and Asians had the highest rate of death due to stroke.

Table 2: Age-Adjusted Death Rates for Coronary Heart Disease (CHD), Wisconsin 1997-2003

Sex	White	African American	American Indian	Asian	Hispanic
Male	221.8	205.9	273.7	104.6	88.8
Female	119.1	123.7	141.8	58.7	44.7
Total	162.9	156.6	198.0	76.9	65.1

Table 3: Age-Adjusted Death Rates for Stroke, Wisconsin 1996-2003

Sex	White	African American	American Indian	Asian	Hispanic
Male	64.1	90.3	61.1	68.7	28.8
Female	58.4	75.9	70.1	66.0	27.4
Total	61.2	83.0	66.4	67.5	28.5

Table 4: Age-Adjusted Death Rates for Congestive Heart Failure (CHF), Wisconsin 1996-2003

Sex	White	African American	American Indian	Asian	Hispanic
Male	25.9	22.1	**	**	**
Female	20.8	19.1	**	**	**
Total	22.8	20.6	**	**	**

** A rate is not calculated when there were fewer than 50 deaths per 100,000 population

Source: Wisconsin DHFS, DPH, Bureau of Health Information and Policy. *Wisconsin Deaths*, 1996-2003.

Many others who survive heart attacks and strokes develop disabilities and at increased risk for having another cardiovascular disease event. While advances in medicine and surgery have improved survival rates, they are expensive. In 2002, there were over 94,000 hospitalizations for cardiovascular disease-related care in Wisconsin, averaging about 5 days per stay. In 2005, the estimated annual direct and indirect costs for CVD-related care in Wisconsin were more than $7 billion, including over $2.1 billion in hospital charges.[5,6]

Table 5: Number of Hospital Discharges and Rates by Principal Diagnosis Groups with Associated Length of Stay, Wisconsin Hospitals 2002*

Principal Diagnosis Groups**	Total Number	Average Length of Stay (Days)	Total Inpatient Days	Average Charge per Stay	Total Charge of all Stays
Major CVD	94,096	4.6	434,618	$21,878	$2,058,622,297
Diseases of the Heart	92,216	4.6	426,534	$22,022	$2,030,839,721
Coronary Heart Disease	33,256	4.1	135,465	$27,231	$905,584,959
Stroke	15,870	4.8	76,509	$15,302	$242,846,630
Congestive Heart Disease	15,343	5.0	76,173	$13,822	$212,074,339
Hypertensive Disease	3,066	4.6	13,967	$14,575	$44,685,920
Arterial Disorders	5,824	6.9	40,202	$32,764	$190,819,174

* Includes discharges of persons living or dead.

** Groups are not mutually exclusive since individuals may have had more than one diagnoses.

Source: Wisconsin DHFS, DPH, Bureau of Health Information and Policy, 2002.

Table 6: Number of Hospital Discharges and Rates, by Race/Ethnicity, by Principal Diagnosis Groups, Wisconsin Hospitals 2002*

Principal Diagnosis Group**	White		African American		Asian		American Indian		Hispanic	
	#	Rate*	#	Rate*	#	Rate*	#	Rate*	#	Rate*
Total CVD	86,125	17.4	4,858	14.5	353	3.2	526	9.7	1036	5.0
Diseases of the heart	84,827	17.1	4,391	13.1	324	3.0	516	9.5	969	4.6
Coronary heart disease	30,912	6.2	1,120	3.3	100	0.9	182	3.3	346	1.7
Stroke	14,608	2.9	742	2.2	91	0.8	77	1.4	168	0.8
Congestive heart disease	13,649	2.8	1,185	3.5	57	0.5	129	2.4	194	0.9
Hypertensive disease	2,211	0.4	706	2.1	41	**	18	**	77	0.4
Arterial disorders	5,328	1.1	307	0.9	18	**	36	**	66	0.3
Diabetes	5,459	1.1	1,206	3.6	42	**	110	2.0	205	1.0

* Rate: These are ratios of the number of discharges per 1,000 population. These discharges may include more than one hospitalization for a person and the discharge categories are not exclusive. Rates are not reported if there were less than 50 hospitalizations.

** Groups are not mutually exclusive since individuals may have had more than one diagnoses.

Source: Wisconsin DHFS, DPH, Bureau of Health Information and Policy, 2002.

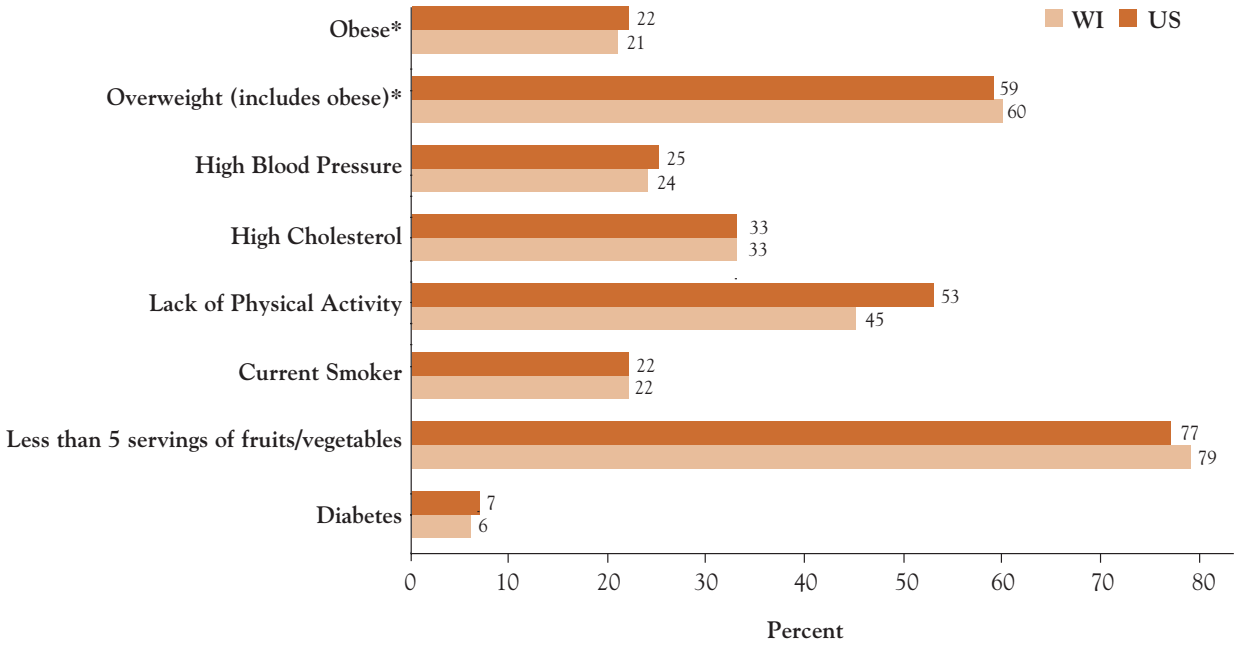
Prevalence of Risk Factors for Heart Disease and Stroke in Adults

In 2002 (the most recent data), about 289,000 (7%) of people in Wisconsin of all ages had been told by a health professional that they had cardiovascular disease, and thousands more were likely to have been undetected.[7] Unhealthy food choices, excessive food portions, inactivity, and cigarette smoking are some of the behaviors that put the state's residents at increased risk for developing cardiovascular disease. According to the Behavioral Risk Factor Survey 2003 (BRFS), a statewide telephone survey of risk factors and risk behaviors:

- Sixty percent (60%) of all Wisconsin adults aged 18 years and older are overweight, including 20% who are obese
- Almost 80% consume less than the recommended five servings of fruits and/or vegetables per day
- A little less than half (45%) do not get the minimum suggested amount of physical activity, 30 minutes of moderate intensity physical activity at least three times per week
- Twenty-two percent (22%) smoke cigarettes
- One-third of adults in Wisconsin have high cholesterol, and
- About one quarter of people in the state have high blood pressure.[8]

While the number of Wisconsin residents reporting risk factors for cardiovascular disease and stroke is at or below the national average for six out of eight risk factors, there is clearly a need to improve heart-healthy behaviors in Wisconsin.

Figure 1: Percent of Adults with Risk Factors for CVD, Wisconsin and the Nation 2003



* Wisconsin Behavioral Risk Factor Survey, 2002

Source: CDC Behavioral Risk Factor Surveillance System (BRFSS), 2003.

The Impact of Heart Disease and Stroke in Wisconsin

Each of these major risk factors effects the development of heart disease. The presence of more than one risk factor can speed up the progression of heart disease. At the same time, making improvements in any one of these areas can reduce the risk of (and sometimes reverse) heart disease and related conditions.

Overweight and Obesity

The number of Wisconsin adults who are overweight has risen from 38% in 1990 to 60% in 2003 (including those who are obese). The rates for obesity have nearly doubled, from 11% of people in 1990 to about 21% in 2003. These numbers are based on estimated Body Mass Index (BMI), which is a person's weight (measured in kilograms) divided by his/her height (measured in meters). Overweight is defined as a BMI of 25-29.9 kg/m^2. Obesity is a BMI of more than 30 kg/m^2. Being overweight puts persons at higher risk for high blood pressure, high blood cholesterol and other lipid disorders, and diabetes.

Diabetes

Although only 6% of adults in Wisconsin have been told they have diabetes by a health professional, the fact that so many other people have CVD risk factors suggests that the size of this group will be increasing. Between 66-75% of persons with diabetes will die from some form of heart or blood vessel disease. The risk of diabetes for Hispanics and African Americans is almost twice that for whites. More and more health providers are finding children and teens with Type 2 diabetes. African American, Hispanic, and American Indian children who are obese and have a family history of Type 2 diabetes are especially at risk.[5]

Physical Inactivity

About 45% of adults in Wisconsin do not get 30 minutes or more of moderate physical activity at least three times a week. An even larger number of African Americans and Hispanics (61% and 50% respectively) do not get enough physical activity.[8] Less active persons have a 30-50% higher risk for developing high blood pressure.[9]

Inadequate Fruits and Vegetables (Nutrition)

Staying at a healthy weight by balancing calorie intake, eating a reduced-fat, low-salt diet high in fruits and vegetables, and increasing physical activity are known to help prevent and reduce overweight, high cholesterol, and high blood pressure. However, a majority of adults in Wisconsin (79%) eat an inadequate amount of fruits and/or vegetables each day, even though there is plenty of fresh produce through grocers and local farmer's markets in most areas.

High Cholesterol

High blood cholesterol contributes to atherosclerosis, the gradual build up of fatty plaques in the arteries that may lead to heart attack and stroke. One in three Wisconsin adults have been told by a health professional that they have high cholesterol.[7] Lowering cholesterol levels by just 10% could reduce the number of people who develop coronary heart disease by about 30%.[10]

High Blood Pressure (Hypertension)

High blood pressure is a major risk factor for both heart disease and stroke. Currently, about one out of every four adults in Wisconsin has been told by a health care professional that they have high blood pressure. It is likely that many more have high blood pressure but do not know it. It is estimated that nearly one-third of persons with high blood pressure are unaware of this "silent killer".[11]

Tobacco Use

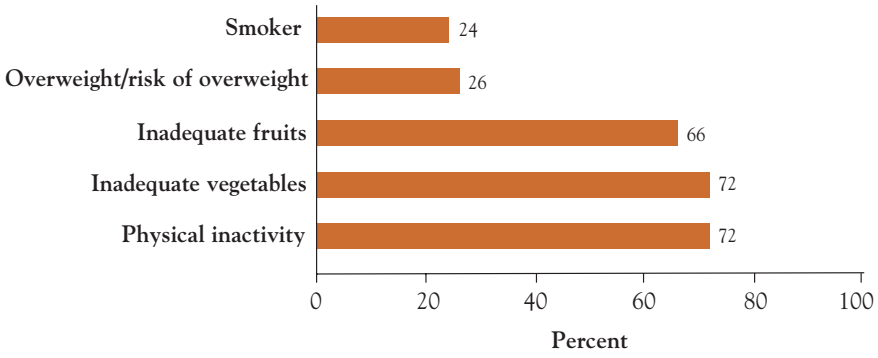
The number of adults in Wisconsin who smoke has declined only slightly in recent years (from 24% in 2000 to 22% in 2003) despite public awareness of its harmful effects. Reducing the number of Wisconsin adults who smoke can have a major impact on cardiovascular deaths. Research shows that people who quit smoking before age 50 have half the risk of dying in the next 15 years compared to those who continue to smoke.[3]

Prevalence of Risk Factors for Heart Disease and Stroke in Youth

Many of the risk factors for CVD begin in youth. The 2003 Wisconsin Youth Risk Behavior Survey (YRBS), a random written survey performed every two years among public schools with grades 9-12, revealed that:

- About one out of four high school students report smoking cigarettes at least one day of the past 30 days.
- More than one quarter of high school students are overweight or at risk for being overweight. In young people between 2 to 17 years of age, overweight is defined as sex- and age-specific BMI at the 95th percentile or greater based on growth charts from the Centers for Disease Control and Prevention. A young person is considered at risk for being overweight if his/her BMI is more than or equal to the 85th percentile but less than the 95th percentile.
- Sixty-six percent (66%) of students eat fewer than three servings of fruits daily.
- Seventy-two percent of students (72%) eat fewer than three servings of vegetables in a day.
- The same percent of students (72%) do not get moderate physical activity at least five days per week.

Figure 2: Percent of High School Students with Risk Factors for CVD, Wisconsin, 2003



Source: 2003 Wisconsin Youth Risk Behavior Survey (YRBS) Wisconsin Department of Public Instruction, Division of Learning Support.

National health trends have shown an increase in overweight and obese children, poor diet, and physical inactivity which have led to early onset of diabetes, hypertension, and abnormal lipid levels among youth up to 17 years of age.[12] Preliminary data from some pilot programs in Wisconsin suggest similar findings. Given the commonality of CVD risk factors among adults and youth, and the aging "baby boomer" population, the toll of CVD will likely worsen in the next ten years unless dramatic measures are taken to turn things around.

The Challenge: Promoting Heart-Healthy Behaviors

Photograph: Wisconsin Department of Tourism

The Challenge: Promoting Heart-Healthy Behaviors

The impact of cardiovascular disease and its risks are staggering. Cardiovascular disease affects adults and youth, males and females, and crosses all racial/ethnic and economic groups. The encouraging news is that most of the contributing factors for heart disease and stroke are preventable with lifestyle changes. A key strategy to reduce the impact of cardiovascular-related death and disability is to promote healthy behaviors that can reduce the likelihood of developing heart disease and stroke. Since risk factors for heart disease and stroke develop early in life, it is important that adults and youth understand how to choose heart-healthy behaviors. Statewide mass media campaigns, community-based programs, and other public education efforts need to be expanded to provide greater access to healthy lifestyle information. Promoting healthy lifestyle choices like physical activity; smoking cessation; a diet rich in fruits and vegetables with limited intake of foods high in sugar, harmful fats and salt; and reducing portion sizes can have a major impact on reducing cardiovascular-related risk factors, disability and death.

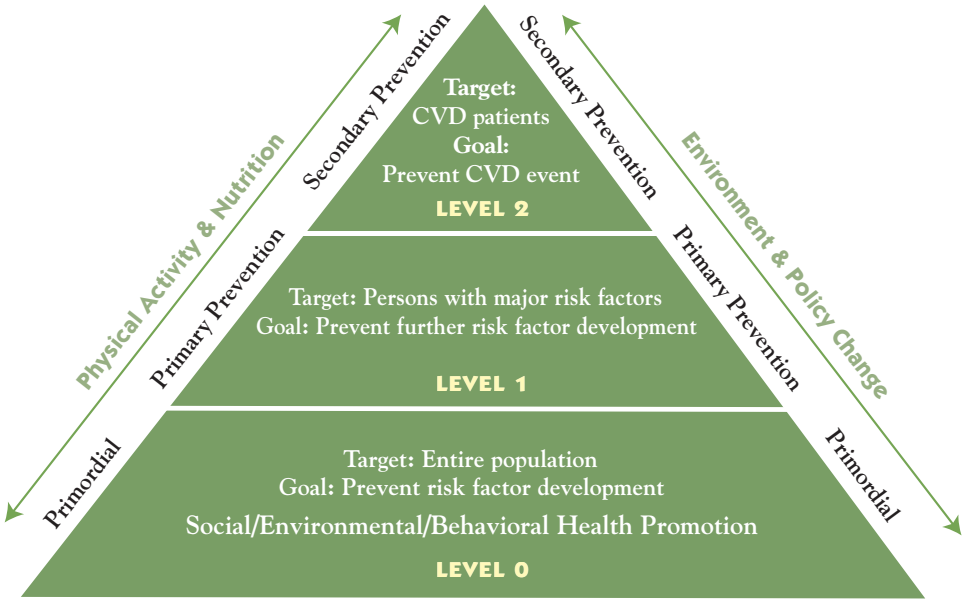
Research has shown that the most successful strategies for improving health include changing environments as well as behaviors. The environments where we live and work, namely our schools, worksites, communities, and healthcare systems, play a large role in shaping our knowledge, attitudes, behavior, and habits. Creating positive shifts in these settings will require a comprehensive effort. There will need to be changes in policies, regulations and funding that support healthful environments, and education on the harmful economic and health effects of heart disease and stroke.

Smoking bans provide encouraging examples of the rapid community benefits of health enhancing policies. Six months after a smoke free ordinance was passed in Helena, Montana, a study by three physicians reported a 40% decline in hospital admissions for heart attack. The rate of admissions for heart attack remained unchanged for people living and working outside the city.[13] Since the study, Montana has passed a statewide smoke free policy for all public places. Smoke free policies also cause current smokers to smoke less – an important step in quitting. Seven out of ten current smokers want to quit; smoking bans help by providing public areas that are free from the temptation or pressure to smoke.[14]

continued

A Model For Heart Disease and Stroke Prevention

Preventing the onset or progression of heart disease and stroke is a complex process that requires changes in behaviors, policies, and environments that involve three different segments of the population. The following model illustrates this dynamic. The focus for the largest segment of the population is to prevent the development of risk factors for heart disease and stroke (primordial prevention). At the next level, primary prevention aims at preventing further progression among those with known risks for heart attack and stroke. At the last level, the goal of secondary prevention is to prevent a first or subsequent heart attack or stroke from happening. To succeed in improving cardiovascular health across the state, the *Wisconsin Plan for Heart Disease and Stroke Prevention 2005-2009* must embrace the needs of all three levels, focusing on policies and environmental changes that can enhance heart-health in the key settings that impact behavior – our schools, worksites, communities, and healthcare systems.



Model 1: CVH Program Prevention Model

Source: Adapted from Centers for Disease Control and Prevention.

Prevention (Level 0)

Target: Entire Wisconsin population.

Goal: Prevent development of any modifiable risk factor, including creating, maintaining, or restoring favorable social and environmental conditions and the promotion of healthy lifestyle behaviors.

Primary Prevention (Level 1)

Target: Anyone in the population with one or more major risk factors for heart disease and stroke.

Goal: Prevent further development or progression of risk factors, such as having a heart attack, heart failure, or stroke.

Secondary Prevention (Level 2)

Target: All survivors of heart attack, heart failure, or stroke events and others with known heart disease who need long-term case management.

Goal: Reduce disability and the risk for other cardiovascular events.

The Strategic Planning Process

Photograph: Wisconsin Department of Tourism, RJ & Linda Miller

The Strategic Planning Process

History

In 2002, the Wisconsin Cardiovascular Health Program(CVHP) began to coordinate efforts to improve cardiovascular health by inviting stakeholder and partner organizations to form a Cardiovascular Health (CVH) Alliance. Health systems, community-based organizations, policymakers, businesses, health care professionals, voluntary non-profit organizations, and academics from approximately 50 groups around the state joined this initiative. The Cardiovascular Health Alliance, along with the CVHP staff, set out to develop a state plan to improve cardiovascular health and quality of life for all people living in Wisconsin. The group reviewed statewide surveillance data on heart disease, stroke, and related risk factors, and discussed barriers to heart healthy behaviors. The group also shared information on programs, resources, and policies that are contributing to healthier behaviors. These discussions inspired a vision for cardiovascular health in Wisconsin where:

Community environments promote heart-healthy behaviors and provide access to evidence-based cardiovascular care for all people living in Wisconsin.

Ideally, physical activity among people of all ages would be desirable and commonplace. Wisconsin residents would have safe access to facilities for physical activity in their communities. Students would engage in regular physical activity at school, and worksites would encourage exercise as a way to reduce stress and improve overall health. Residents would enjoy clean, smoke-free air in all public facilities. Restaurants, worksite cafeterias, and schools would offer nutritious meals and snacks that meet dietary guidelines and are offered in reasonable portions. Health care professionals would advise patients in adopting and maintaining healthy behaviors that prevent or modify heart disease and stroke. Furthermore, all residents would have access to evidence-based preventive care and cardiovascular disease management from a coordinated team of health care professionals.

Strategic Planning Logic Model

While the "ideal" environment may not be achievable, a coordinated, well-directed plan to reduce heart disease and stroke can significantly improve quality of life for people living in Wisconsin. Recognizing the enormous task of changing systems and behavior, the CVH Alliance embraced a socio-ecological model for behavioral change adapted from the Centers for Disease Control and Prevention.

Model 2: Logic Model for Behavioral Change

Activities	Systems Change	Individual Behavioral Change	Improved Health Status
• Capacity building • Surveillance • Interventions	• Environmental supports • Policy changes • Schools • Worksites • Communities • Health systems	• Physical activity • Nutrition • Tobacco use • Excess weight • Obesity • Secondary prevention • Cholesterol • Diabetes • Hypertension	• Morbidity • Mortality • Age of onset • Racial/Ethnic disparity • Quality of life

Source: Adapted from CDC State Heart Disease and Stroke Prevention Program Evaluation Framework.

The Strategic Planning Process

Three key activities—capacity building, interventions, and surveillance—serve as the foundation for improving long-term health outcomes. Capacity building refers to developing the infrastructure, organizational partnerships, processes, and strategies and objectives, necessary (the state plan) to encourage large-scale behavioral change. Informed by the *Wisconsin Plan for Heart Disease and Stroke Prevention 2005-2009*, the CVH Program and its partners develop and implement interventions for targeted audiences with the aim of changing communities at the state and local level. Surveillance of the initial burden of CVD serves as a baseline to identify and monitor when and how widespread risk factors occur, and the effectiveness of treatments. Ongoing surveillance will monitor the effectiveness of the Work Plan strategies and actions, and progress made toward achieving long-term measures for heart health.

As policies and environmental supports change to better support cardiovascular health, so do the practices, resources, and environments in schools, worksites, communities, and health systems. In this way, these settings help shape the awareness, behaviors, and habits that can bring about individual behavioral change. The actions that individuals take to modify or prevent CVD risks, and get the appropriate treatment when needed will contribute to improved health status and quality of life for themselves and the state as a whole.

To develop the state plan, CVH Alliance members divided into four Work Groups to address goals, strategies, and objectives across the four settings previously mentioned. These four Work Groups were:

- Public Policy and Advocacy
- Community and Health Promotion
- Risk Factor Detection and Control
- Secondary Prevention and Rehabilitation

The Work Groups met quarterly from 2002 to 2004 to develop and refine their suggestions, guided by the following principles:

- Effective use of technology and forums will optimize communication of best practices among organizations, policy makers, and health systems.
- Prevention and management of risk factors must begin in youth.
- A focused effort to prevent high blood pressure and high cholesterol also will benefit weight control, good nutrition and increased physical activity.
- Interventions will target high-risk, priority populations.
- It will be essential to address policies and interventions in health systems, schools, worksites, and communities to create heart-healthy environments.
- Ongoing surveillance and analysis of data will help to develop and refine priority actions.

To avoid duplicating efforts, the Work Groups carefully considered actions already being taken by other DHFS health promotion programs, such as the Nutrition and Physical Activity Program, Tobacco Control Program, and the Diabetes Prevention and Control Program. The CVH Program will continue to work with these programs on activities that reduce the CVD risks of physical inactivity, poor nutrition, overweight and obesity, tobacco use, and diabetes.

Cardivascular Health Program Goals

The ideas from the CVH Alliance Work Groups were formed into six priority goals that are similar to suggested outcomes in the national *Healthy People 2010* and state *Healthiest Wisconsin 2010* plans.[15] These goals will be overseen by the CVH Program and the CVH Alliance and are dependent on organizations, communities, health care systems, schools, and businesses to carry out activities or make changes that will work toward improved heart health. The goals of this state plan are to:

1. Increase the Wisconsin CVH Program capacity to promote cardiovascular health in Wisconsin.
2. Identify and provide information on statewide policies that improve and enable cardiovascular health.
3. Promote community environments that support healthy behaviors to reduce heart disease and stroke.
4. Promote early detection and treatment of risk factors for heart disease and stroke.
5. Reduce recurrence, complications, disabilities, and death from heart attack and stroke.
6. Work toward the elimination of health disparities in heart disease and stroke.

Heart Disease and Stroke Prevention Work Plan 2005-2009

Photographs: Wisconsin Department of Tourism

Goal 1: Increase the Cardiovascular Health Program capacity to promote cardiovascular health in Wisconsin.

Strategy 1: Increase the network of organizations in the Cardiovascular Health Alliance, and enhance its value to members.

Objectives:

1.1A By 2006, establish a CVH Alliance Steering Committee to provide leadership on CVH Program implementation.

- Develop Work Groups to explore and develop initiatives for implementation of the state plan.

1.1B By 2006 (and ongoing), additional partners will become members of the CVH Alliance.

- Identify and recruit organizations whose focus is on heart disease and stroke prevention and control.
- Identify communities with healthy lifestyle programs and recruit them for membership on the CVH Alliance.

Strategy 2: Support forums for sharing national and statewide evidence-based and/or best practices for healthy eating, physical activity, tobacco cessation, and a healthy weight.

Objectives:

1.2A By 2006 and ongoing, organizations will meet with representatives from the Department of Health and Family Services, Department of Transportation, Department of Natural Resources, Department of Public Instruction, and the Governor's Council on Physical Fitness and Health to collaborate on shared interests and activities related to cardiovascular health.

1.2B By 2006, identify and connect organizations, programs and resources across the state focused on improving cardiovascular health.

- Utilize CVH Alliance members to identify existing organizations, programs, and materials that address CVD risk prevention.
- Gather samples of existing materials and websites.
- Organize a forum for CVH Alliance members to network and share resources.
- Develop other forums for communities and statewide organizations to share information and resources.

1.2C By 2007, develop a state speaker's bureau of experts on best practices for heart disease and stroke prevention, detection, disease management, and emergency response.

1.2D By 2007, develop and promote the use of an electronic database of national, state, and community-based resources that support heart disease and stroke prevention, risk detection, and disease management.

Strategy 3: Continue to develop and strengthen surveillance of heart disease and stroke detection and treatment.

Objective:

1.3A By 2007, research new and existing data sources, e.g., Medicare, Medicaid, MetaStar, HMO and Wisconsin Primary Healthcare Association (WPHCA) to expand CVH surveillance, within HIPPA compliance.

Goal 2: Identify and provide information on statewide policies that improve and enable cardiovascular health.

Strategy 1: Create and support an agenda on cardiovascular health issues to educate public officials and professionals who disseminate information to member organizations/associations.

Objectives:

2.1A By 2006, organize a plan to develop CVD health policies and programs that support the heart disease and stroke prevention health plan and *Wisconsin's Healthiest People 2010*. Partners will convene a policy summit to determine priority policy needs.

- Utilize CVH Alliance partners to bring people to the summit.
- Identify potential barriers to address.

2.1B By 2006, organize a plan to educate public officials and other professionals on priority cardiovascular health-related policies and programs.

- Research legislation that has been effective in the design of safe and accessible facilities that support and promote physical activity.
- Identify proven programs that can promote heart-healthy environments, e.g., those involving nutritious food, clean air, physical activity, restricted tobacco use, etc.
- Research successful models for educating and engaging communities and organizations in policy issues.
- Identify organizations to target for education.

2.1C By 2007, list information on the DHFS CVH Program website about policies and organizations that focus on ways to improve cardiovascular health.

Strategy 2: Promote awareness of cardiovascular health initiatives and policies to targeted audiences.

Objectives:

2.2A By 2006, implement a statewide public awareness campaign on the impact of heart disease and stroke and how to prevent it.

2.2B By 2007, implement a communication plan to inform targeted groups about cardiovascular disease initiatives and policies.

- Identify groups to educate.
- Enlist the support of media specialists to develop key messages and communication vehicles.
- Disseminate information based on the communications plan.

Strategy 3: Promote the standardization of criteria and curricula for professional and paraprofessional certifications/licensure on emergency response to heart attack and stroke, CVD risk prevention, and care (as appropriate to their responsibilities).

Objectives:

2.3A By 2006 and ongoing, enlist the support of professional organizations to include evidence-based and/or best practices for CVD risk prevention, treatment, and emergency response in their certification/licensure curricula as appropriate.

- Identify the top 10 professional certifications/licensures to target.
- Research the current content for heart disease and stroke prevention and care for the respective certifications/licensures.
- Assemble information on evidence-based and/or best practices for heart disease and stroke prevention, coronary artery disease (CAD), cardiopulmonary resuscitation (CPR), and emergency response.
- Educate priority organizations on the importance of including CVD-related training based on evidence-based and/or best practice guidelines.
- Survey nursing programs in Wisconsin to include instruction on the use of stroke- scales (types), high blood pressure guidelines, cholesterol guidelines, and appropriate treatments for control and prevention of high blood pressure and cholesterol in their curriculum.
- Sponsor a CVD Health Education Forum to educate additional professional certification/licensure programs on the value of including CVD-care in their curriculum.

2.3B By 2008, work with schools of nursing, and business organizations to adopt evidence-based and/or best practices for CVD-related care as part of their curricula and worksite wellness programs.

Strategy 4: Improve emergency medical response to heart attack and stroke, including communication center, emergency dispatch and field emergency medical services (EMS).

Objectives:

2.4A By 2008, 50% of the community centers, shopping malls, schools, businesses, faith-based organizations, EMS, and fire and police vehicles in Wisconsin will be equipped with automatic external defibrillators (AEDs) and personnel trained in their proper use.

2.4B By 2008, 90% of Wisconsin communities will have landline-enhanced 911 service.

2.4C By 2008, 50% of Wisconsin communities will have wireless-enhanced 911 service.

Goal 3: Promote community environments that support healthy behaviors to reduce heart disease and stroke.

Strategy 1: Increase the public's awareness of modifiable risk factors associated with heart disease and stroke.

Objectives:

3.1A Identify target groups to receive community and worksite toolkits and their respective needs for resources.

- Create a list of potential target groups, e.g., faith-based organizations, educators, employers, insurers, and community organizations.
- Determine what resources/information each group wants and needs.

3.1B Develop a community-based toolkit (for businesses and community organizations) of CVD health resources on how to encourage heart-healthy environments.

- Identify and compile information on existing CVH programs and resources utilizing CVH Alliance partners and the CDC.
- Identify available materials targeted to Hmong, African American, Native American, and Latino populations.
- Organize information to address different age groups, to be user-friendly, and to distinguish evidence-based information and best practices.
- Create a toolkit evaluation to assess toolkit usefulness.
- Revise toolkit components based on evaluation feedback.

3.1C By 2007, distribute and offer training on the community-based toolkit to schools, community organizations, faith-based organizations, etc.

- Enlist the support of CVH Alliance members to promote the toolkit and trainings.
- Identify existing conferences and associations through which to provide training on the toolkit for target groups.
- List training events and contacts on the CVHP website.

3.1D By 2007, distribute and offer training sessions on the CDC toolbox "Making the Business Case to Employers for CVH" to all health systems, and Wisconsin's top 200 employers.

- Encourage worksite wellness programs to incorporate programs for heart disease and stroke prevention, and screening for high blood pressure and dyslipidemia.

3.1E By 2005 and ongoing, organizations, communities, schools, businesses and health systems will coordinate with the Wisconsin Nutrition and Physical Activity Program to support efforts to improve nutrition and physical activity for Wisconsin residents.

Strategy 2: Improve the public's awareness of the signs and symptoms of heart attack and stroke and the need to call 911 immediately.

Objective:

3.2A By 2005 and ongoing, implement a public awareness campaign of the signs and symptoms of heart attack and stroke and how to respond appropriately (Appendices C,D).

- Disseminate information on signs and symptoms of heart attack and stroke, and use of automatic external defibrillators (AEDs), CPR, and 911 to all registered Wisconsin employers.
- Continue to support Wisconsin Stroke Alert Day in May each year.

Strategy 3: Promote the importance of nutrition and physical activity for children in grades K-12.

Objectives:

3.3A By 2006, develop communications targeted to schools, community, and faith-based organizations that emphasize the importance of increasing physical activity, and eating nutritious meals and snacks in appropriate portions to prevent cardiovascular disease in children.

3.3B By 2006, work with partners to develop and/or assemble culturally- and language-appropriate materials to educate parents and children on healthy food choices, portion size, increasing physical activity levels, and reducing television/computer screen time.

Goal 4: Promote early detection and treatment of risk factors for heart disease and stroke.

Strategy 1: Increase rates of detection for cardiovascular risks among adults.

Objectives:

4.1A By 2009, increase by 10% (to 95%) the number of adults aged 18 and older who have had their blood pressure measured within the preceding two years and can state whether their blood pressure was normal or high.

- Encourage worksites and faith communities to offer regular blood pressure screenings for constituents.
- Disseminate clinical practice guidelines once updates are available.
- Work with health care systems to increase their CVD HEDIS® measure rates (see Glossary) for high blood pressure identification and control.

4.1B By 2009, increase by 10% (to 82%) the number of adults aged 18 and older who have had a lipid panel done within the preceding two years and can state whether their blood cholesterol was normal or high.

- Encourage worksites and faith communities to offer regular screenings for dyslipidemia for consituents.
- Disseminate clinical practice guidelines once updates are available.
- Work with health care systems to increase their CVD HEDIS® measure rates for low-density lipoprotein (LDL) screening and control.

Strategy 2: Increase implementation of best practices for early treatment of CVD risk factors.

Objectives:

4.2A By 2009, increase the number of adults with high blood pressure who are taking appropriate actions to control their high blood pressure.

- Follow the state diabetes template for training programs.
- Improve access to resources for indigent populations.
- Increase awareness of importance of BP control through media campaigns.
- Increase adherence to medication and lifestyle changes through patient education.

4.2B By 2009, increase the number of adults who have had their low-density lipoprotein (LDL) tested.

- Follow the state diabetes template for training programs.
- Improve access to screening resources for indigent populations.
- Increase awareness of importance lipid control through media campaigns.

4.2C By 2009, 90% of the state's health systems will provide training to health care professionals on cultural-competency and best practices in counseling patients on obesity, smoking, diabetes, high blood pressure, high cholesterol, and elevated lipid levels in diverse populations.

4.2D By 2007, develop a plan and projected outcomes for youth-focused interventions based on analysis of the CDC youth health index, Youth Risk Behavior Survey (YRBS) and review of best practices.

4.2E By 2007, increase the number of youth with diabetes aged 5-17 years old who have their LDL controlled.

Strategy 3: Create a voluntary statewide youth health index to monitor indicators of healthy behavior in children (grades K-12), including BMI, physical activity, and blood pressure measurement.

Objectives:

4.3A By 2009, a majority of Wisconsin public schools will participate in a voluntary youth health behavior index.

- Develop materials to educate school officials on the importance of CVD risk prevention.

4.3B By 2009, increase by 50% the number of youth aged 5-17 years who have had their blood pressure measured within the preceding two years.

By 2009, increase by 50% the number of youth aged 5-17 who have had a lipid panel done within the preceding two years.

Goal 5: Reduce recurrence, complications, disabilities, and death from heart attack and stroke.

Strategy 1: Improve monitoring and evaluation of CVD management and acute treatment of heart attack and stroke.

Objectives:

5.1A By 2005 and on going, encourage health care systems to track and evaluate quality of care.

- Encourage use of medical records systems and track and evaluate the quality of care.
- Encourage use of internet-based tools for heart attack, CHF, and stroke.
- Encourage health systems to pay for performance.
- Start a stroke registry.
- Identify and eliminate obstacles hospitals may have for tracking and evaluating quality.

5.1B By 2006, discuss with the Wisconsin health insurance plans ways to improve HEDIS® CVD measures.

5.1C By 2007, all health systems and EMS partners will disseminate and provide training on best practices on acute treatment of myocardial infarction (MI), congestive heart failure (CHF), and stroke.

Strategy 2: Increase the awareness of and adherence to evidence-based clinical guidelines for treatment of CVD in adults and youth.

Objectives:

5.2A Redesign care processes to ensure care is consistent with guidelines.

- Develop a tool kit repository, and disseminate information on care management tools and resources,
- Encourage use of electronic medical records.

5.2B By 2005 and ongoing, encourage health systems to provide training to health care providers on the Adult Cardiovascular Risk Reduction Initiative Guidelines (Appendix A).

- Update guidelines every two years or whenever new national guidelines are released.

5.2C By 2007, identify and develop CVD care guidelines in children and young adults.

- Update guidelines every two years or whenever new national guidelines are released.

5.2D By 2008, work with health systems, Wisconsin Medical Society, and special physician groups to disseminate CVD care guidelines for children and young adults to their health care providers.

5.2E By 2009, encourage general use of the Health and Human Services Chronic Care Model in health care systems and Federally Qualified Health Centers (FQHCs) in Wisconsin.

- Work through the Wisconsin Collaborative Diabetes Quality Improvement Project for FQHCs (see Glossary).
- Work through the Wisconsin Collaborative Diabetes Quality Improvement Project (see Glossary).

Strategy 3: Provide a clearinghouse for health systems and clinics on establishing and evaluating a team-based approach to heart disease and stroke prevention, care management, and patient self-care.

Objectives:

5.3A By 2006, gather information from health care systems on current initiatives for team-based heart disease and stroke prevention and management.

5.3B By 2007, research and assemble patient education materials that promote best practices for CVD prevention, and self-care in management of CVD.

5.3C By 2008, establish and promote a database on health care system contacts, information, funding sources, and research on team-based approaches to CVD management.

Strategy 4: Increase awareness of and adherence to evidence-based guidelines for rehabilitation services for heart attack and stroke survivors.

Objectives:

5.4A By 2008, data will be available to determine the adequacy and appropriateness of rehabilitation services in the state for heart attack and stroke victims.

5.4B By 2009, establish registries for the collection of the incidence of heart attack and stroke using established national data elements.

5.4C By 2009 and on going, using the registries for heart attack and stroke determine if survivors are receiving established rehabilitation based on national guidelines.

Goal 6: Work toward the elimination of health disparities in heart disease and stroke.

Strategy 1: Continue to implement and evaluate programs for team-based approaches to detect and treat CVD risk factors in priority populations.

Objectives:

6.1A By 2007, foster networking among health advocates who are promoting health education, healthy lifestyles, and self-advocacy in communities of color.

- Explore current initiatives that could be applied to minority communities.
- Reinforce local initiatives associated with lifestyle changes.
- Identify respected community leaders within each target group.
- Hold a forum for community leaders in target groups to identify needs and get community buy-in.
- Enlist school nurses in grassroots education.

6.1B By 2007, identify needs and develop strategies for interventions among Hmong and Hispanic groups through development of data tools and best practices.

- Identify what tools and long-term support are available (especially for moderate poor).
- Develop education for middle and high school students that focuses on lifestyle changes for preventive care.
- Develop anti-smoking education as a top priority, especially for young adults (aged 18-25).
- Enlist the support of healthcare providers.

6.1C By 2008, provide awareness of the risk CVD poses to Wisconsin women through development of a social marketing plan to encourage participation in programs to change women's risk behaviors.

6.1D By 2008, promote active membership in healthcare careers so that changes come from within each community.

Strategy 2: Implement data-driven strategies based on state surveillance to reduce disparities.

Objectives:

6.2A By 2007, develop strategies and objectives based on surveillance data and research to address demographic and geographic disparities related to CVD prevention, detection, and treatment in Wisconsin.

- Evaluate effectiveness of current pilot programs for evidence-based, best practices, and promising practices.
- Identify available resources for diverse populations; learn from NC Wise Woman program.
- Define culturally appropriate and relevant messages for each culture.
- Review findings from MetaStar lipid control program.

6.2B By 2008, implement strategies and objectives to reduce disparities among priority populations, e.g., American Indians, African Americans, Hispanics, Hmong.

Strategy 3: Increase the understanding of Wisconsin's disparities related to cardiovascular disease.

Objectives:

6.3A By 2007, collaborate with epidemiologists, researchers, and other stakeholders, e.g., Wisconsin Nutrition and Physical Activity Work Group (WINPAW), Great Lakes Intertribal Council, American Heart Association to focus on efforts to understand and eliminate disparities in prevention of and detection of cardiovascular risk factors.

6.3B By 2008 and on-going, state surveillance will develop a plan to collect and monitor data from priority, high-risk populations for CVD in targeted counties.

Strategy 4: Collaborate with MetaStar, Wisconsin Medicaid, Badger Care, health care systems, and Wisconsin Primary Healthcare Association to provide improved access to care and quality of care for underserved populations.

Objectives:

6.4A By 2006 and ongoing, continue the partnerships with MetaStar, the Diabetes Collaborative for Quality Improvement Projects and Wisconsin Primary Healthcare Association to address access to care and quality care issues.

6.4B By 2006, develop a memorandum of understanding with the Wisconsin Medicaid and Badger Care programs to promote quality of care for Wisconsin's underserved populations.

6.4C By 2006, develop a memorandum of understanding with the Wisconsin Medicaid and Badger Care programs to receive data pertinent to determining the number of underserved residents accessing care.

Evaluation and Measurement

Photograph: Wisconsin Department of Tourism, Gary Knowles

Evaluation and Measurement

This plan recommends how Wisconsin can improve the cardiovascular health status of its residents. The goals and strategies of this plan are designed to change policies and environments so that people will have improved cardiovascular health. Everyone involved with this plan wants it to be successful, and they all want to know if they can make it even better. Finding out whether it is successful and how to make it better is called evaluation.

Evaluating Work Plan Activities

The CVH Program staff and CVH Alliance members chose goals for this plan that are important for improving heart healthy behaviors and lifestyles in Wisconsin. They then chose strategies that they believed would give the best chance for reaching the goals. A strategy is carried out through one or more activities. The authors of this plan will evaluate how successful their recommended strategies were in achieving their desired outcomes. The job of evaluation is to find out whether the goals were reached, and if they were not what could be changed so that the goals could be reached.

Three evaluation questions must be asked about each activity that is performed.

1. How was the activity expected to help reach the goal?
2. What was done to perform the activity?
3. What products or other work did the activity produce, and did it involve the right people?

These questions will be answered by collecting and examining several types of documents and other items including:

- minutes of planning meetings,
- the number and types of people involved in an activity,
- descriptions of work done, e.g., number of people contacted in a community media campaign, and
- descriptions of products produced, e.g., heart-healthy menus for school cafeterias.

The answers to these three questions will show if an activity was performed the way it was planned. The answers will also help to improve future activities. However, the answers do not tell us whether the activities had any impact on reducing heart disease and stroke.

Evaluating Improvements in Cardiovascular Health

Several questions must be asked to evaluate improvements in cardiovascular health including:

1. Have fewer people died from heart attacks, stroke, and other cardiovascular diseases?
2. Do fewer people have the major risk factors for heart attack and stroke, i.e., high levels of LDL cholesterol, high blood pressure, obesity, and tobacco use?
3. Are more people engaging in the following behaviors that help to prevent risks of cardiovascular disease:
   a. Being physically active?
   b. Eating nutritious foods in reasonable portions?
   c. Avoiding tobacco use and exposure?

To answer these and similar questions the Work Plan requires the collection of several types of information using public health methods called surveillance. Wisconsin has been conducting surveillance of heart disease and stroke information for several years. The surveillance data tables that follow show the status of cardiovascular health for Wisconsin residents, and the target levels of cardiovascular health for 2009.

In addition, the evaluation of this plan will require the collection of new information concerning changes in policies and environmental supports. The extent of these additional data collection efforts will depend heavily on the amount of resources that are devoted to these efforts.

Evaluation and Measurement

Data Sources

Several and varied data sources will be employed to measure and evaluate the progress of the Wisconsin Plan for Heart Disease and Stroke Prevention. Some of these are the following:

- Wisconsin Mortality Data
- Wisconsin Behavioral Risk Factor Survey (BRFS)
- Wisconsin Youth Risk Behavior Survey (YRBS)
- Wisconsin Inpatient Hospitalization Discharge Database
- Wisconsin Medicaid Program Data
- Medicare Program Data for Wisconsin
- Wisconsin Census Records and Population Estimates
- Wisconsin Family Health Survey
- Wisconsin Collaborative Diabetes Quality Improvement Project Data in HEDIS® Cardiovascular Measures
- Federally Qualified Health Centers (FQHC) pertinent collected registry data

In addition to the above data sources, the Cardiovascular Health Program will keep seeking and identifying appropriate data sources to enhance the surveillance system. Ongoing evaluation of cardiovascular-related data, using the above data sources, will allow periodic monitoring of progress toward objectives of the Wisconsin Plan for Heart Disease and Stroke Prevention.

Long-Term Cardiovascular Health Indicators

The following long-term performance measures will assist in evaluating improvements in cardiovascular health.

Reduction in Risk Factors for Cardiovascular Disease

1. Promote physical activity, adequate consumption of fresh fruits and vegetables, BMI control, and tobacco cessation to reduce CVD risks among adults and youth.

Prevalence of CVD Risk Factors in Wisconsin Adults

	Current (2003)	2009
Physical inactivity (< 30 min. moderate physical activity three times weekly)	45%	40%
Less than five fruits and/or vegetables/day	79%	70%
Adults are overweight/obese (BMI≥25)	60%	54%
Current Smoker	22%	12%

Source: Wisconsin Behavioral Risk Factor Survey 2003

Evaluation and Measurement

Prevalence of CVD Risk Factors in Wisconsin Youth

	Current (2003)	2009
Physical inactivity (< 30 min. moderate physical activity five times weekly)	72%	61%
Less than three fruits daily	66%	50%
Less than three vegetables daily	72%	50%
Youth overweight or at risk for being overweight	26%	20%
Current Smoker	24%	12%

Source: Wisconsin Youth Risk Behavior Survey, Division of Learning Support, Department of Public Instruction, 2003

Improved Blood Pressure Detection and Control

2. Increase by 5% the number of adults aged 18 years and older who have had blood pressure measured within the preceding two years and can state whether their blood pressure was normal or high.

Detection of High Blood Pressure in Wisconsin Adults

	Current (1999)	2009
Adults aged 18 years and older who have had blood pressure measured within preceding two years*	92.6% (1999)	> 95%

Source: * Wisconsin Behavioral Risk Factor Survey, 1999

3. Increase the number of youth aged 5-17 years who have had blood pressure measured within the preceding two years.

Detection of High Blood Pressure in Wisconsin Youth

	Current	2009
Youth aged 5-17 years old who have had blood pressure measured within preceding two years	Data source to be developed	

4. Increase by 10% the number of adults aged 18 years and older with high blood pressure who are taking appropriate action (e.g., losing weight, increasing physical activity, changing diets) to help control their blood pressure.

Control of High Blood Pressure in Wisconsin

	Current (2002)	2009
Persons with CVD event and whose blood pressure was controlled (≥ 140/90 mmHg)*	62%	68%

Source: * Health Plan Employer Data and Information Set (HEDIS), 2002

Improved Cholesterol Detection and Control

5. Increase by 10% the number of adults aged 18 years and older who have had their blood cholesterol checked within the preceding five years.

Detection of High Cholesterol in Wisconsin

	Current (2003)	2009
Adults who had their cholesterol measured within preceding 5 years*	75%	82%

Source: * Wisconsin Behavioral Risk Factor Survey, 2003

6. Reduce by 10% the number of adults aged 18 years and older who are diagnosed with high blood cholesterol levels.

Control of High Cholesterol in Wisconsin

	Current (2003)	2009
Adults had been told by healthcare professionals that have high blood cholesterol	33%	30%

Source: * Wisconsin Behavioral Risk Factor Survey, 2003

7. Among adults aged 18 years and older who have had a CVD event, increase by 10% those who have had their LDL-cholesterol level screened and controlled (< 100 mg/dL).

Control of LDL Cholesterol Among Wisconsin Residents After a CVD Event

	Current (2002)	2009
LDL screening among Wisconsin adults age 18-75 after acute CVD event	84%	92%
LDL controlled among Wisconsin adults age 18-75 after acute CVD event	69%	75%

Source: * Health Plan Employer Data and Information Set (HEDIS), 2002

8. Increase the number of youth aged 5-7 years old who have LDL cholesterol levels < 100 mg/dL.

Control of LDL Cholesterol Among Wisconsin Youth

	Current	2009
Youth aged 5-17 who have LDL levels < 100 mg/dL	Data source to be developed	
Youth aged 5-17 with diabetes who have LDL levels < 100 mg/dL	Data source to be developed	

Evaluation and Measurement

Reduce Cardiovascular Deaths

9. Increase the number of adults aged 20 years and older who are aware of the early warning symptoms and signs of a heart attack and the importance of accessing care by calling 911.

Awareness of Signs and Symptoms of Heart Attack and Stroke Among Wisconsin Adults

	Current (2003)	2009
Residents aware of at least two signs and symptoms of heart attack	98%	
Residents aware of at least two signs and symptoms of stroke	96%	

Source: * Wisconsin Behavioral Risk Factor Survey, 2003

10. Reduce coronary heart disease (CHD) deaths in Wisconsin by 10%.

11. Reduce stroke deaths in Wisconsin by 10%.

12. Reduce congestive heart failure (CHF) deaths in Wisconsin by 10%.

Age-Adjusted Death Rate For Cardiovascular Diseases In Wisconsin*

	2003*	2009
Death Rate of CHD among Wisconsin adults	135	122
Death Rate of stroke among Wisconsin adults	52	47
Death Rate of CHF among Wisconsin adults	22	20

Note: * Death Rate is age-adjusted by US 2000 population and expressed in deaths/100,000 population

Reduce ethnic/racial disparities

13. Reduce ethnic/racial disparities in deaths due to CHD, stroke, and CHF.

Age-Adjusted Death Rates for CHD, Stroke, and CHF Among Target Populations*

	2003*	2009
Death Rate of CHD death among American Indians	198	178
Death Rate of stroke death among African Americans	83	74
Death Rate of CHF death among American Indians	28	25

Note: * Death Rate is age-adjusted by US 2000 population and expressed in deaths/100,000 population

How to Get Involved

Photograph: Wisconsin Department of Tourism, RJ & Linda Miller

How to Get Involved

The Wisconsin Plan for Heart Disease and Stroke Prevention 2005-2009 is a call to action for all organizations, communities, and individuals in Wisconsin to work together to reduce the risks, disability, and death associated with heart attack and stroke. The partnership of all people living in Wisconsin is needed to strive to reach the goals proposed in this plan. It will take the active involvement of many partners to apply diverse and innovative solutions to change system, community, and individual behaviors. Public and private groups are needed to affect policies and environments that support heart health, and individual residents will need to take action to change their own behavior. By working together, the people of Wisconsin have a great opportunity to create communities that support healthier lifestyles, reduce much of the burden and disability of CVD, and improve the quality of life for generations to come.

What You Can Do

1. Review the Work Plan goals, strategies, and objectives. Identify specific items with which your organization may be involved or want to address.
2. Commit to becoming a partner with the CVH Program and others in reducing heart disease and stroke.
3. Register your endorsement of the plan. Anyone with existing activities, new ideas, or simply an interest in being involved can endorse the plan.
4. Collaborate with other endorsers of the plan who share your goals.

How to Endorse the Wisconsin Plan for Heart Disease and Stroke Prevention

You can endorse the plan by printing and faxing the endorsement form in this publication, or completing it online: http://dhfs.wisconsin.gov/Health/cardiovascular/index.htm. When you endorse the plan, your name/organization will be acknowledged on the plan web site and in plan-related promotional materials. Your contact information will remain confidential and will not be used for any other purpose. As partners register their endorsement, the CVH Program will track the activities taking place in Wisconsin to identify additional areas of need. The CVH Program will also evaluate the plan and make recommendations for future activities based on its analysis.

Department of Health and Family Services
Division of Public Health

State of Wisconsin
Bureau of Community Health Promotion
(608) 266-3483

Endorsement of the Wisconsin Plan for Heart Disease and Stroke Prevention 2005-2009

Please copy and fax your endorsement to the Wisconsin Cardiovascular Health Program, (608) 266-8925, or complete it online at http://dhfs.wisconsin.gov/Health/cardiovascular/index.htm. Your endorsement may be publicly acknowledged on the Cardiovascular Health Program website and in plan-related materials.

1. I am endorsing the *Wisconsin Plan for Heart Disease and Stroke Prevention 2005-2009* as an:

   ❑ Individual (Go to number 6) ❑ Organization

2. My full name, or the name of my organization or group:

   _____

3. The standard abbreviations or acronym, if any, used by my organization or group:

   _____

4. The type of organization I represent (choose up to three):

   ❑ Coalition
   ❑ Community Group
   ❑ Food Service/Restaurant
   ❑ Health Plan/Insurer
   ❑ Professional Association
   ❑ Recreational/Sports Setting
   ❑ Retail/Business Setting
   ❑ Work site/Employer
   ❑ Communication/Media
   ❑ Faith Community
   ❑ Health Care Delivery
   ❑ Government Agency Non-Profit
   ❑ Public Health Department
   ❑ Research Institution
   ❑ School/College/ University
   ❑ Other

5. I can provide a link from my organization's web site to the Wisconsin Cardiovascular Health Program. ❑ Yes, and I will ❑ No ❑ Decision pending

6. I/we can work on the following activities in the *Wisconsin Plan for Heart Disease and Stroke Prevention 2005-2009* to help accomplish its goals: _____

   _____

   _____

7. I would like to become a member of the ❑ CVH Alliance ❑ Stroke Committee

   Contact Information (Individuals' contact information will be kept confidential)

   Contact Name:_____ Credentials:_____

   Organization (if applicable): _____

   Position/Title:_____

   Mailing Address:_____

   Telephone No. __(___)_____ Fax No.___(___)_____

   E-mail:_____

   Website:_____

Resources

Photograph: Wisconsin Department of Tourism, Donald S. Abrams

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Glossary

Age-adjusted death rate: the number of deaths occurring per 100,000 population per year, calculated in accordance with a standard age structure to minimize the effect of age differences when rates are compared between populations or over time.

Atherosclerosis: a pathological condition affecting the medium-sized and larger arteries, especially those that supply the heart (coronary arteries), the brain, (the carotid and cerebral arteries), and the lower extremities (the peripheral arteries), as well as the aorta; underlies the occurrence of heart attacks, many strokes, peripheral arterial disease, and dissection or rupture of the aorta.

Automated external defibrillators (AEDs): An automated external defibrillator (AED) is a device used to detect and treat cardiac arrest due to cardiac arrhythmias. Uncorrected, these arrhythmias rapidly lead to irreversible brain damage and death. By applying a shock to the entire heart muscle, the AED uniformly clears the heart's electrical system, hopefully allowing it to resynchronize. The AED automatically determines if a shock is needed and automatically selects and delivers the appropriate energy level.

Behavioral change: an intervention approach that uses public information and education to promote behavioral patterns favorable to health for the population as a whole; also includes interventions (e.g., counseling) at the group or individual level for the same purpose.

Behavioral Risk Factor Survey (BRFS): a representative, statewide telephone survey of Wisconsin household residents aged 18 and older. The Wisconsin BRFS is part of the national Behavioral Risk Factor Surveillance System (BRFSS), which is coordinated by the U.S. Centers for Disease Control and Prevention (CDC). The survey includes information on risk factors such as cigarette smoking, alcohol consumption, overweight, sedentary activity patterns, and poor diet. The survey also asks about use of health services such as routine checkups, cholesterol tests, and cancer screening.

Behavioral Risk Factor Surveillance System (BRFSS): a state-based, CDC-sponsored system of health surveys that generate information about health risk behaviors and attitudes, clinical preventive practices, and health care access and use primarily related to chronic diseases and injury.

Blood cholesterol: the blood concentration of a family of lipid or "fatty" molecular compounds obtained directly from the diet or produced in the body from fatty dietary components; a necessary factor in development of atherosclerosis; total cholesterol concentration is classified as "high" if it is > 200 mg/dl. Subtypes of cholesterol differ in their relation to CVD risk, with high-density lipoprotein (HDL) cholesterol considered "good," and low-density (LDL) cholesterol considered "bad."

Body mass index (BMI): measures weight in relation to height (see calculation under obesity).

Cardiopulmonary resuscitation(CPR): cardiopulmonary resuscitation or CPR, is emergency first aid for an unconscious person whose breathing and pulse have stopped. CPR is commonly taught to ordinary people who may be the only ones present in the crucial few minutes before emergency personnel are available.

Cardiovascular disease (CVD): may refer to any of the disorders that can affect the circulatory system, but often means coronary heart disease (CHD), heart failure, and stroke, taken together.

Cardiovascular disease prevention: a set of interventions designed to prevent first and recurrent CVD events (e.g., heart attack, heart failure, and stroke). For CVD, primary prevention refers to detection and control of risk factors, whereas secondary prevention includes long-term case management for survivors of CVD events. CVD prevention complements cardiovascular health(CVH) promotion.

Cardiovascular Risk Reduction Initiative: a statewide initiative in Wisconsin to reduce and prevent heart disease and stroke. The initiative is led by the DHFS Cardiovascular Health Program in partnership with most of Wisconsin's health maintenance organizations and advocacy organizations. The Cardiovascular Risk Reduction Initiative promotes proactive risk factor assessment, testing, lifestyle modification counseling, and appropriate medical treatment through a variety of tools and materials. http://dhfs.wisconsin.gov/Health/cardiovascular/CRRI.htm

Glossary

Cardiovascular health (CVH): a combination of favorable health habits and conditions that protects against development of cardiovascular disease.

Cardiovascular health promotion: a set of interventions designed to reduce a population's risk for CVD through policy, environmental, and behavioral changes; also supports other approaches that apply to people who have suffered recognized CVD events (e.g., by facilitating public access to emergency care or by fostering social/environmental and behavioral changes that reinforce secondary CVD prevention); sometimes identified with primordial CVD prevention; complements CVD prevention.

Carotid arteries: the four main arteries of the head and neck, which supply blood to the brain and elsewhere in the head.

Cerebral arteries: blood vessels connecting the internal carotid arteries with the brain.

Chronic Care Model: The Chronic Care Model identifies the essential elements of a health care system that encourage high-quality chronic disease care. These elements are the community, the health system, self-management support, delivery system design, decision support and clinical information systems. Evidence-based change concepts under each element, in combination, foster productive interactions between informed patients who take an active part in their care, and providers who have resources and expertise. The model can be applied to a variety of chronic illnesses, health care settings and target populations. The bottom line is healthier patients, more satisfied providers, and cost savings. See www.improvingchroniccare.org/change/model/components.html.

Comprehensive public health strategy: an approach to a major health problem in the population that identifies and employs the full array of potential public health interventions, including health promotion and disease prevention.

Congestive heart failure (CHF): impairment of the pumping functions of the heart as the result of heart disease; heart failure often causes physical disability and increased risk for other cardiovascular events.

Coronary arteries: the arteries that supply blood to the heart muscle and whose narrowing or occlusion constitutes coronary heart disease and can precipitate a heart attack.

Coronary heart disease: heart disease caused by impaired circulation in one or more coronary arteries; often manifests as chest pain (angina pectoris) or heart attack.

Diabetes (or diabetes mellitus): a metabolic disorder resulting from insufficient production or utilization of insulin, commonly leading to cardiovascular complications.

Dyslipidemia: Disorders in the lipoprotein metabolism; classified as high cholesterol, high triglycerides, combined hyperlipidemia, and low levels of high-density lipoprotein (HDL) cholesterol. All of the dyslipidemias can be primary or secondary. Both elevated levels of low-density lipoprotein (LDL) cholesterol and low levels of HDL cholesterol predispose one to premature atherosclerosis.

Emergency care: treatment for people who have experienced a first or recurrent acute cardiovascular event (e.g., heat attack, heart failure, and stroke) designed to increase their probability of survival and to minimize associated damage or disability.

Evidence-based medicine: the use of agreed-upon standards of evidence in making clinical decisions for treating individual patients or categories of patients.

Federally Qualified Health Center (FQHC): A Federally Qualified Health Center (FQHC) is an American community based health organization. An FQHC provides comprehensive primary health, oral, and mental health/substance abuse services to persons in all stages of the life cycle.

Health care systems: the community health centers, health care clinics, hospitals, and health insurance plans that deliver or pay for health services.

Glossary

Health disparities: differences in the burden and impact of disease among different populations, defined for example, by sex, race or ethnicity, education or income, disability, place of residence, or sexual orientation.

Healthiest Wisconsin 2010: A Partnership Plan to Improve the Health of the Public: The Wisconsin state health plan for the decade 2000-2010. It is the state's health strategic plan including a vision, mission, goals, objectives, and priorities for the public health system partnership.

Healthy People 2010: a national document that presents the most important health-related goals and objectives to be achieved in the the United States to be achieved by the year 2010.

HEDIS® (Health Plan Employer Data and Information Set): Healthcare systems' evaluation of the effectiveness of their care in managing blood pressure, cholesterol, diabetes, and smoking cessation in their constituencies.

Heart attack: an acute event in which the heart muscle is damaged because of a lack of blood flow from the coronary arteries, typically accompanied by chest pain and other warming signs but sometimes occurring with no recognized symptoms (i.e., "silent heart attack").

Heart disease: any affliction that impairs the structure or function of the heart (e.g., atherosclerotic and hypertensive diseases, congenital heart disease, rheumatic heart disease, and cardiomyopathies).

Heart Disease and Stroke Prevention Program: a CDC program initiated in 1998 that supports states in their efforts to prevent heart disease and stroke; for more information see www.cdc.gov/cvh/stateprogram.htm.

High blood pressure (hypertension): a condition in which the pressure in the arterial circulation is greater than desired; associated with increased risk for heart disease, stroke, chronic kidney disease, and other conditions; blood pressure is considered "high" if systolic pressure (measured at the peak of contraction of the heart) is > 140 mm Hg or if diastolic pressure (measured at the fullest relaxation of the heart) is > 90 mm Hg.

High-density Lipoprotein (HDL): A form of cholesterol that circulates in the blood commonly called "good" cholesterol. High HDL lowers the risk of heart disease. An HDL of 60 mg/dL or greater is considered high and protects against heart disease. An HDL less than 40 mg/dL is considered low and increases the risk for developing heart disease.

Incidence: the number of new cases of disease occurring in a population of given size within a specified time interval (e.g., the average annual incidence of stroke for women in Rochester, Minnesota during 1985-1989 was approximately 120/100,000 population).

Low-density Lipoprotein (LDL): A complex of lipids and proteins, with greater amounts of lipid than protein that transports cholesterol in the blood. High levels are associated with an increased risk of atherosclerosis and coronary heart disease. See blood cholesterol.

MetaStar: Wisconsin's health care quality improvement organization (QIO). MetaStar works with health care professionals and health systems to provide cost-effective, quality health care by improving processes and outcomes of care. See www.metastar.com.

Mortality: rate of death expressed as the number of deaths occurring in a population of given size within a specified time interval (e.g., 265 annual deaths from heart disease per 100,000 U.S. Hispanic women, 1991-1995).

Obesity: usually defined in terms of body mass index (BMI) which is calculated as body weight in kilograms (1 kg=2.2lbs) divided by height in meters (1 m=39.37 in) squared; adults with a BMI greater than 30.0 kg/m^2 are considered "obese," and those with a BMI of 25-29.9 kg/m^2 are considered "overweight." In children, overweight is defined as BMI greater than the 95th percentile value for the same age and sex group.

Peripheral arteries: arteries in the upper and lower extremities (arms and legs).

Physical inactivity: lack of habitual activity sufficient to maintain good health, resulting in an unfavorable balance between energy intake and expenditure and fostering the development of overweight or obesity and other risk factors for heart disease and stroke.

Glossary

Policy and environmental change: an intervention approach to reducing the burden of chronic disease that focuses on enacting effective policies (e.g., laws, regulations, formal and informal rules) or promoting environmental change (e.g., changes to economic, social, or physical environment).

Prevalence: the frequency of a particular condition within a defined population at a designated time (e.g., 12.6 million Americans living with heart disease in 1999).

Primary CVD prevention: a set of interventions, including the detection and control of risk factors, designed to prevent the first occurrence of heart attack, heart failure, or stroke among people with identifiable risk factors.

Primordial CVD prevention: a set of interventions targeting people without risk factors or CVD (including promotion of healthy behavior patterns) to prevent development of risk factors.

Priority Populations: groups at especially high risk for CVD, (e.g., those identified by sex, race or ethnicity, education, income, disability, place of residence, or sexual orientation).

Rehabilitation: an intervention approach designed to limit disability among survivors of CVD events and reduce their risk for subsequent events.

Risk behavior: a behavioral pattern associated with increased frequency of specified health problems; for example, high salt intake, smoking, and binge drinking are all associated with CVD.

Risk factor: an individual characteristic associated with increased frequency of specified health problems; for example, high LDL cholesterol, high blood pressure, and diabetes are all associated with CVD.

Risk factor detection and control: an intervention approach that targets people with identifiable risk factors; includes both screening or other methods of detection and long-term disease management through changes in lifestyle, behavior, and medication (when necessary).

Secondary prevention: a set of interventions aimed at survivors of acute CVD events (e.g., heart attack, heart failure and stroke) or others with known CVD in which long-term case management is used to reduce disability and risk for subsequent CVD events.

Stroke: sudden interruption of blood supply to the brain caused by an obstruction or the rupture of a blood vessel.

Survival: remaining alive for a specified period (e.g., beyond the 28-day definition of case fatality) after a CVD event.

Tertiary CVD prevention: an intervention approach included in secondary prevention, sometimes distinguished as reducing disability among survivors of CVD events through rehabilitation.

Wisconsin Collaborative Diabetes Quality Improvement Project: a joint partnership including the Wisconsin Diabetes Prevention and Control Program (DPCP), the University of Wisconsin (Madison) Department of Population Health Sciences, MetaStar (Wisconsin's Quality Improvement Organization), the Department of Health and Family Services Division of Health Care Financing (Medicaid Program), health maintenance organizations (HMOs), and other health systems. The group was established to evaluate implementation of the Essential Diabetes Mellitus Care Guidelines; share resources, population-based strategies and best practices; and, improve diabetes care through collaborative quality improvement initiatives. See www.dhfs.state.wi.us/health/diabetes/Diabetes_Collaborative_Improvement_Project.htm.

Youth Risk Behavior Surveillance System (YRBSS): the national system that monitors priority health risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States.

Youth Risk Behavior Survey (YRBS): a survey conducted by states as part of the national Youth Risk Behavior Surveillance System (YRBSS). The national YRBS is administered every two years during the spring semester and provides data representative of 9th through 12th grade students in public and private schools throughout the United States.

Health Plan Partners

Advanced Healthcare
7878 North 76th Street
Milwaukee, WI 53223
Tel: (262) 512-2880
(800) 709-2080
www.ah.com

Atrium Health Plan, Inc.
400 2nd St. South, Suite 270
Hudson, WI 54016
Tel: (715) 386-8693
(800) 249-4300
Fax: (715) 386-8326
www.atriumhealthplan.com

Blue Cross Blue Shield of Wisconsin
500 Hwy 151 East
Platteville, WI 53818
Tel: (888) 239-9514
www.bluecrosswisconsin.com

Dean Health Plan
1277 Deming Way
Madison, WI 53717
Tel: (608) 828-1301
(800) 279-1301
Fax: (608) 827-4212
www.deancare.com

Group Health Cooperative of South Central Wisconsin (GHC-SCW)
1265 John Q. Hammons Dr.
Madison, WI 53744-4971
Tel: (608) 251-3356
(800) 605-4327
Fax: (608) 828-9333
www.ghc-hmo.com

Gundersen Lutheran Health Plan
1836 South Ave.
LaCrosse, WI 54601
Tel: (608) 775-8000
(800) 370-9718
Fax: (608) 775-8042
www.glhealthplan.org

Health Tradition Health Plan
P.O. Box 188
La Crosse, WI 54602-0188
Tel: (608) 781-9692
(888) 459-3020
Fax: (608) 781-9653
www.healthtradition.com

Humana, Inc.
N19 W24133 Riverwood Drive,
Suite 300
Waukesha, WI 53188-1174
Tel: (800) 448-6262
www.humana.com

Medical Associates Health Plan
1605 Associates Dr., Suite 101
P.O. Box 5002
Dubuque, IA 52004-5002
Tel: (563) 556-8070
(800) 747-8900
Fax: (563) 556-5134
www.mahealthcare.com

MercyCare Health Plan
3430 Palmer Dr.
P.O. Box 2770
Janesville, WI 53547-2770
Tel: (608) 752-3431
(800) 752-3431
Fax: (608) 752-3751
www.mercyhealthsystem.org

Network Health Plan-Fox Valley
1570 Midway Place
P.O. Box 120
Menasha, WI 54952
Tel: (920) 720-1300
(800) 826-0940
Fax: (800) 897-1923
www.networkhealth.com

Physicians Plus Insurance Corp.
22 E. Mifflin St., Suite 200
P.O. Box 2078
Madison, WI 53701-2078
Tel: (608) 282-8900
(800) 545-5015
Fax: (608) 258-1902
www.pplusic.com

Prevea Health Plan
P.O. Box 11625
Green Bay, WI 54307-1625
Tel: (920) 490-6900
(888) 711-4344
Fax: (920) 490-6942
www.preveahealthplan.com

Touchpoint Health Plan (United)
5 Innovation Court
P.O. Box 8025
Appleton, WI 54912
Tel: (920) 735-6440
(800) 236-6440
Fax: (920) 831-6917
www.touchpointhealth.com

UnitedHealthcare of Wisconsin, Inc.
P.O. Box 507
Appleton, WI 54912-0507
Tel: (800) 357-0974
Fax: (920) 499-0645
www.unitedhealthcare.com

Unity Health Insurance
840 Carolina Street
Sauk City, WI 53583-1374
Tel: (800) 362-3310
Fax: (608) 643-2564
www.unityhealth.com

Valley Health Plan
2270 EastRidge Center
P.O. Box 3128
Eau Claire, WI 54702-3128
Tel: (715) 836-1200
(800) 472-5411
www.valleyhealth.biz

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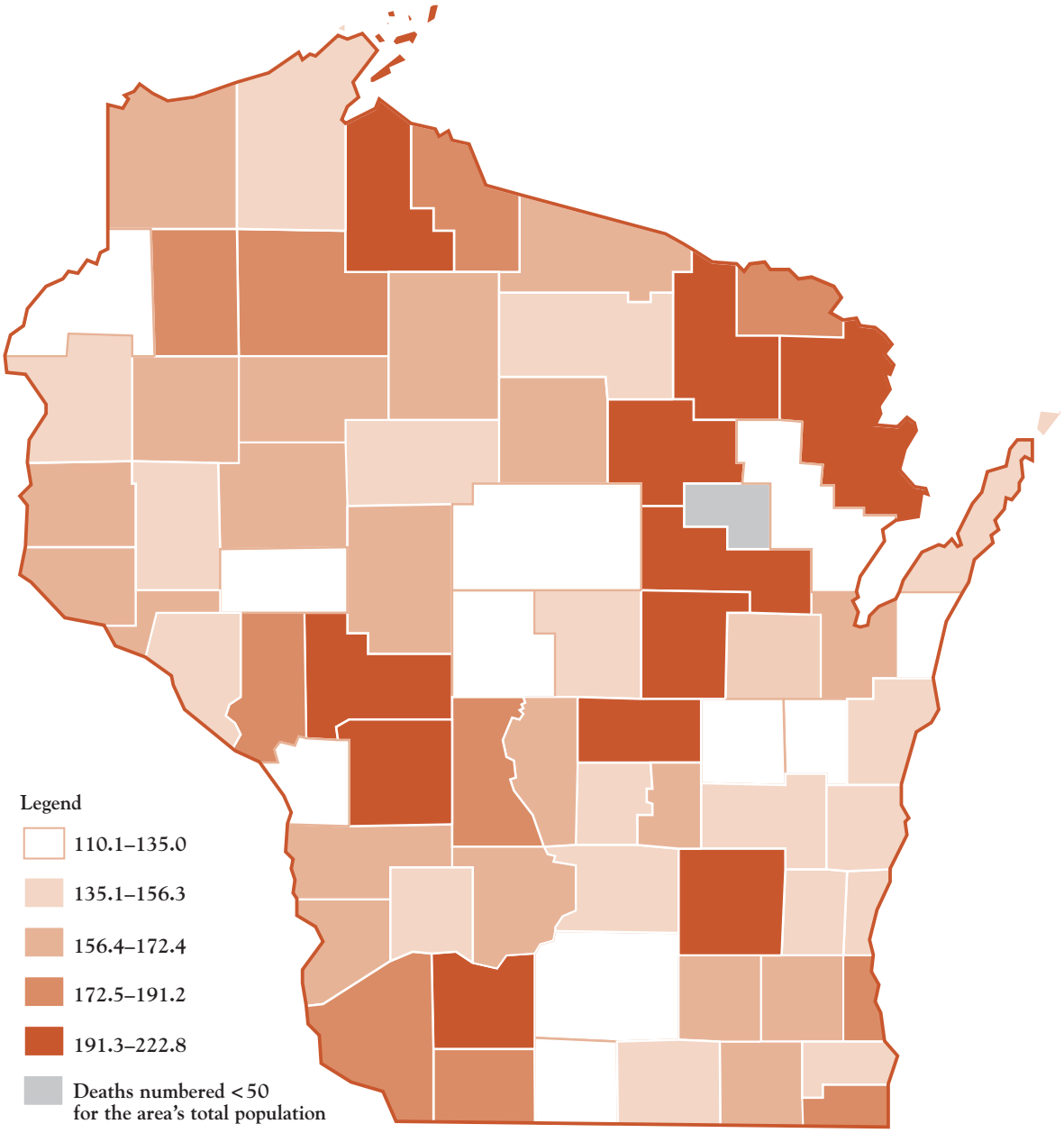
Data Tables

Photograph: Wisconsin Department of Tourism

Map 1: Coronary Heart Disease Death Rate by County, Wisconsin 1997-2003*

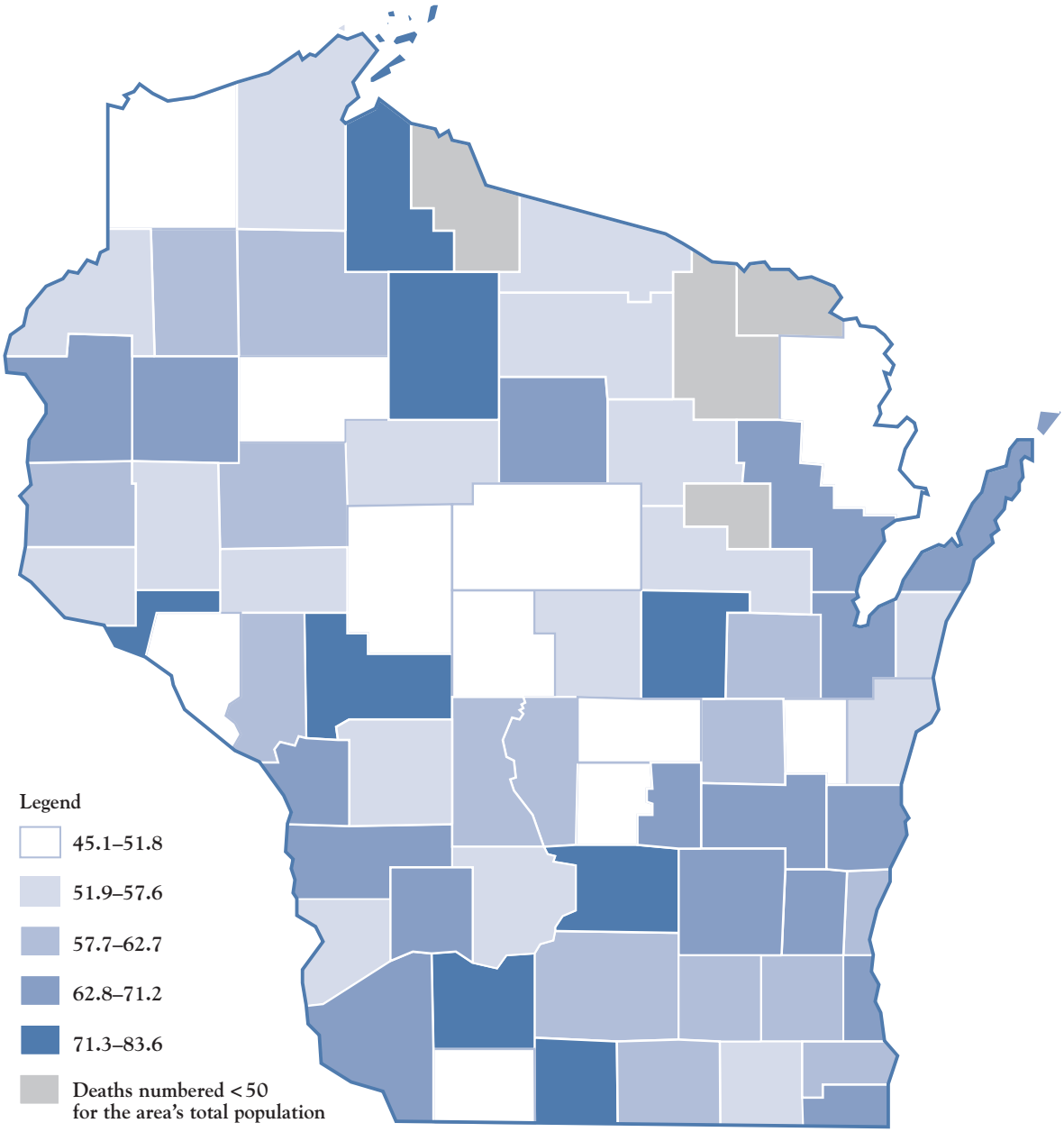


*The death rate is adjusted with U.S. 2000 Standard Population and expressed in per 100,000 population.

Source: Wisconsin Department of Health and Family Services, Division of Public Health, Bureau of Health Information and Policy. *Wisconsin Deaths*, 1997-2003.

Note: Data Tables are updated every few years. See the Cardiovascular Health Program website for a link to the most current information

Map 2: Stroke Death Rate by County, Wisconsin 1997-2003*

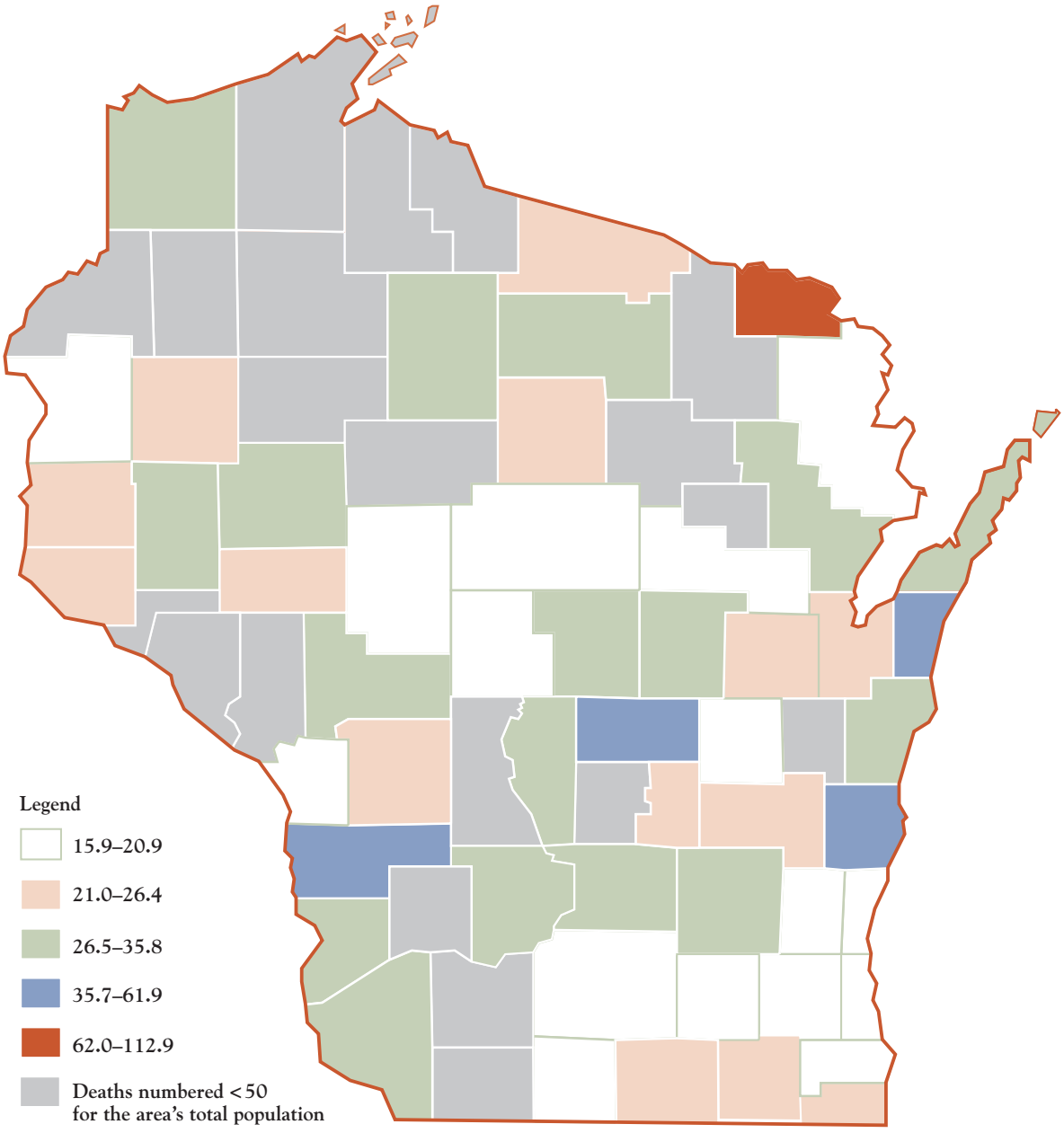


*The death rate is adjusted with U.S. 2000 Standard Population and expressed in per 100,000 population.

Source: Wisconsin Department of Health and Family Services, Division of Public Health, Bureau of Health Information and Policy. *Wisconsin Deaths*, 1997-2003.

Note: Data Tables are updated every few years. See the Cardiovascular Health Program website for a link to the most current information

Map 3: Congestive Heart Failure Death Rate by County, Wisconsin 1997-2003*



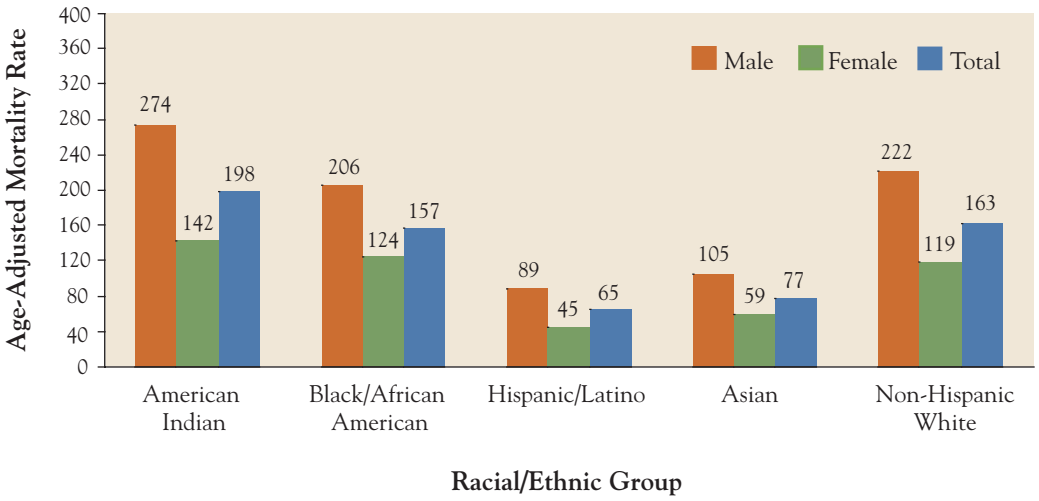
*The death rate is adjusted with U.S. 2000 Standard Population and expressed in per 100,000 population.

Source: Wisconsin Department of Health and Family Services, Division of Public Health, Bureau of Health Information and Policy. *Wisconsin Deaths*, 1997-2003.

Note: Data Tables are updated every few years. See the Cardiovascular Health Program website for a link to the most current information

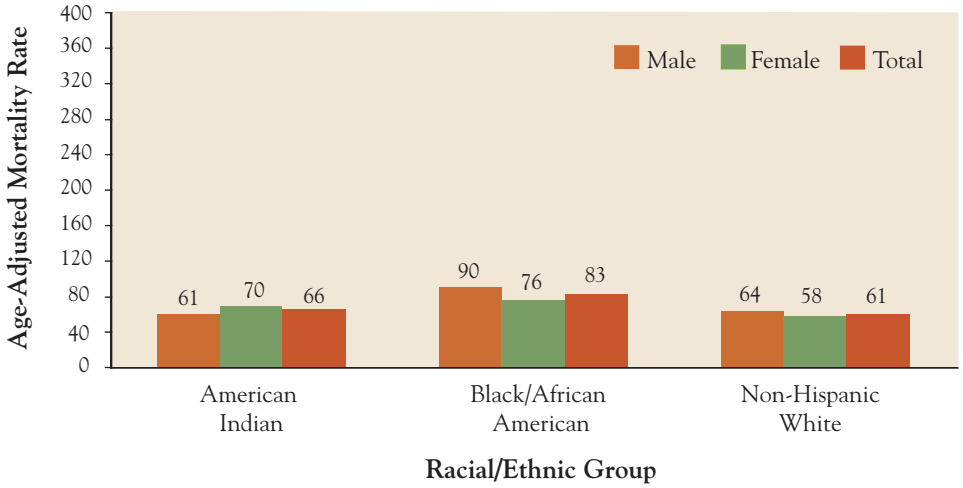
Age-Adjusted Death Rates in Wisconsin 1996-2003

Figure 5: Age-Adjusted Death Rates for Coronary Heart Disease (CHD), By Race/Ethnicity and Sex, Wisconsin 1996-2003*



*All rates are age-adjusted to the US 2003 Standard Population and expressed in deaths/100,000 population.
Source: Wisconsin DHFS, DHCF, Bureau of Health Information, Research and Records Section.

Figure 6: Age-Adjusted Death Rates for Stroke, by Race/Ethnicity and Sex, Wisconsin 1996-2003*



*All rates are age-adjusted to the US 2003 Standard Population and expressed in deaths/100,000 population.
Source: Wisconsin DHFS, DHCF, Bureau of Health Information, Research and Records Section.

Appendices

Photograph: Wisconsin Department of Tourism, RJ & Linda Miller

Appendices

The following resources are a sampling of some of the tools available related to cardiovascular health. Appendix A, Resources for Health Care Professionals, presents clinical practice guidelines from the Cardiovascular Risk Reduction Initiative and other patient management tools. Appendix B, the Personal Heart Care Card, is a valuable tool for individuals to manage their own heart health. Community organizations, businesses, and schools may find Appendices C through E helpful in raising awareness about the signs and symptoms of heart attack and stroke, and locating national and regional programs that focus on specific cardiovascular risk factors.

Appendix A: Resources for Health Care Professionals

CARDIOVASCULAR RESOURCE MATERIALS ORDER - REFERENCE FORM

SHIP TO:		
Name		
Organization/Business Name		
Address		
City	State	Zip
Telephone Number ( )	E-mail address	

MATERIALS AVAILABLE FROM THE CARDIOVASCULAR HEALTH PROGRAM AT NO COST or download from: http://dhfs.wisconsin.gov/Health/cardiovascular/index.htm	**QUANTITY**
Wisconsin Cardiovascular Risk Reduction Communication Record (form) - 03/04	
Preventing Cardiovascular Events in Persons At Risk or With Established CV Disease (1-page laminated provider guidance tool) - 03/04	
Personal Heart Care Record (patient wallet card) - 03/04	
Cardiovascular Disease Surveillance Document - 11/02	
Cardiovascular Health Program Fact Sheet - 11/03	
HOW TO LOCATE GUIDELINES AND STATEMENTS LISTED IN PROVIDER GUIDANCE TOOL	**SOURCE**
- Third Report of the National Cholesterol Education Program Expert Panel on Detection, Evaluation, & Treatment of High Blood Cholesterol in Adults (ATPIII) - The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, & Treatment of High Blood Pressure (JNC-7) - The Practical Guide: Identification, Evaluation, and Treatment of Overweight and Obesity in Adults http://www.nhlbi.nih.gov/guidelines/index.htm Then scroll down to find guidelines.	Obtain from NHLBI Website listed
- AHA/ACC Guidelines for Preventing Heart Attack and Death in Patients With Atherosclerotic Cardiovascular Disease: 2001 Update (09/02) - AHA Guidelines for Primary Prevention of Cardiovascular Disease and Stroke: 2002 Update (07/02) - AHA/NHLBI/ADA Conference Proceedings: Clinical Management of Metabolic Syndrome (01/04) - AHA Guidelines: Evidence-Based Guidelines for Cardiovascular Disease Prevention in Women (02/04) http://www.americanheart.org/presenter.jhtml?identifier=9181 Then scroll down to the year and month to find each publication.	Obtain from AHA Website listed

Mail orders to:

Wisconsin Cardiovascular Health Program
Department of Health & Family Services
Division of Public Health
P O Box 2659
Madison WI 53701-2659

Or Fax to:

Division of Public Health
Cardiovascular Health Program
Attn: Rose White

Fax: (608) 266-8925

FOR OFFICE USE ONLY	
Date received:	Date Materials Mailed:
Mailed by:	
Comments:	

PREVENTING CARDIOVASCULAR EVENTS IN PERSONS AT RISK or WITH ESTABLISHED CV DISEASE[1-14]

Wisconsin Collaborative for Cardiovascular Risk Reduction Initiative 2004

***Adapted from the AHA/ACC Scientific Statements & Guidelines listed in the references.

CVD RISK FACTORS	CRITERIA FOR RISK	Lifestyle Modifications	Clinical Management Interventions	GOALS
Dyslipidemia 1, 2, 3, 5, 6, 7, 9, 10	**Screening for Lipid Risk Factors** **High Total Cholesterol** ♦ **Borderline High:** ≥ 200-239 mg/dL ♦ **High:** ≥ 240 mg/dL **High LDL[1]:** Primary target for lipid-lowering therapy. ♦ **Very High**: ≥ 190 mg/dL and above. ♦ **High**: ≥ 160-189 mg/dL ♦ **Borderline High**: ≥130-159 mg/dL ♦ **Above Optimal**: ≥ 100-129 mg/dL **High Triglycerides (TG)[1, 2, 3, 6]** ♦ **Very High**: ≥ 500 mg/dL ♦ **High:** 200-499 mg/dL ♦ **Borderline high**: 150-199 mg/dL **Low HDL** ♦ < 40 mg/dL for men ♦ < 50 mg/dL for women[6]	**Recommendations** ♦ Encourage weight loss/management. ♦ Limit diet to <7% saturated fats and < 200 mg/dL of cholesterol from total calories. ♦ Increase consumption of monounsaturated fatty acids (olive/peanut/ canola oils, nuts/peanut butter, avocado, olives). ♦ Suggest plant stanols/sterols (2/day) to lower cholesterol. ♦ Include 6 oz. of fish/wk, specifying tuna, herring or salmon. ♦ Medical nutrition therapy and/or other education as indicated. ♦ Promote and/or increase daily physical activity.	**Initial Assessment**: ♦ Assess fasting lipid panel (FLP) for baseline. **LDL is primary focus.** ♦ If LDL-C cannot be calculated due to elevated triglyceride level, order LDL-C direct measurement[7]. ♦ FLP within 24 hours of hospitalization for an acute event and re-check FLP in 12 weeks. ♦ Periodically re-check FLP thereafter until goal values are met. **High LDL Therapy Options**: ♦ Evaluate for 10 year CVD risk[3]. ♦ Start with lipid lowering agent – statin preferred. (If patients are hospitalized, start statin). ♦ **If LDL is ≥ 130 mg/dL (baseline or on treatment)** start or intensify lipid lowering therapy to reach goal (statin preferred). ♦ **If LDL 100- 129 mg/dL (baseline or on treatment):** ♦ Start lipid lowering therapy (statin preferred). ♦ Consider combined drug therapy (statin + fibrate or niacin if low HDL or high TG). ♦ **If LDL is < 100 mg/dL (baseline or on treatment)**: lipid lowering therapy not required. **High Triglycerides Treatment Options:** ♦ **If TG ≥ 500 mg/dL:** ♦ Treat TG first to prevent pancreatitis. ♦ Initiate/resume lipid-lowering therapy (statin preferred). ♦ **If TG 200-499mg/dL:** ♦ **Start fibrate or niacin.** **Low HDL Therapy Options:** ♦ If HDL < 40 mg/dL for men or < 50 mg/dL for women: ♦ First attain LDL goal. ♦ Then, intensify weight management and physical activity.	**Total Cholesterol Desired** < 200 mg/dL **LDL Desired** < 100mg/dL **Triglycerides Desired** < 150 mg/dL **HDL Desired** ≥ 40 mg/dL for men ≥ 50 mg/dL optimal for women[6] ≥ 60 is a negative risk factor
***High Blood Pressure** 4, 6, 10, 13 **Accurate blood pressure measurement is essential*	**Screening for Hypertension** ♦ **Prehypertension:** ≥ 120-139/ or ≥ 80-89 mmHg ♦ **Hypertension Stage I:** ≥ 140-159/ or ≥ 90-99 mmHg ♦ **Hypertension Stage II:** ≥ 160/ or ≥ 100 mmHg	**Recommendations** ♦ Encourage weight loss/maintenance. ♦ Low sodium diet- 1500 to 2400 mg/day[13]. ♦ DASH Diet[13]- low sodium, high fruits & vegetables, high calcium, low alcohol. ♦ Medical nutrition therapy and/or other education as indicated. ♦ Promote and/or increase daily physical activity.	**Initial Therapy Options for Stage 1 Hypertension:** ♦ THIAZ, BB, ACEI, ARB, CCB, or combination. **Therapy Options for Stage 2 Hypertension:** ♦ 2 or more drug combination for most –THIAZ and ACEI, or ARB, or BB, or CCB. **Therapy for Comorbid Conditions:** ♦ **Heart failure** - THIAZ, ACEI, ARB, BB, ALDO ANT. ♦ **Post MI** - BB, ACEI. ♦ **High CVD risk** - THIAZ, BB, ACEI, CCB. ♦ **Diabetes** - ACEI, ARB, THIAZ, BB, CCB. ♦ **Chronic renal disease** - ACEI, ARB. ♦ **Recurrent stroke prevention** - THIAZ, ACEI. **Key: THIAZ = thiazide diuretic, ACEI - angiotensin converting enzyme inhibitor, ARB = angiotensin receptor blocker, BB = beta-blocker, CCB = calcium channel blocker, ALDO ANT = aldosterone antagonist.**	**Blood Pressure Control: Desired** <120 /and < 80 mmHg **HTN Treatment Goal**: Achieve at least <140/<90 mmHg **Comorbidities:** HTN + diabetes **and/or** kidney disease goal - <130/<80 mmHg

Note: This practitioner's tool was developed to provide guidance to providers and is not intended to replace or preclude clinical judgment.

Wisconsin Department of Health & Family Services, Division of Public Health, Bureau of Community Health and Prevention - PPH 43073.
Download tool from the Cardiovascular Health Program's website: http://dhfs.wisconsin.gov/Health/cardiovascular/index.htm

RISK FACTORS	CRITERIA FOR RISK	Lifestyle Modifications	Clinical Management Interventions	GOALS
Metabolic Syndrome **1, 2, 3, 4, 5, 6, 8, 10,14**	**Any Three (3) of the Following:** ◆ Central Obesity - waist circumference **> 40 inches for men > 35 inches for women**. ◆ Triglycerides ≥ 150 mg/dL ◆ FPG ≥ 100 mg/dL - < 126 mg/dL ◆ Elevated BP ≥ 130/≥ 85 mm Hg ◆ HDL < 40 mg/dL for men. ◆ HDL < 50 mg/dL for women.	**Recommendations** ◆ Encourage weight loss/maintenance. ◆ Medical nutrition therapy and/or other education as indicated. ◆ Promote and/or increase daily physical activity.	**Therapy Options**: ◆ Clinical management of dyslipidemia to **Dyslipidemia Goals**. ◆ Lowering blood pressure to **BP control goal**. ◆ Reduction of insulin resistance through achievement of **Obesity and Physical Activity Goals**. ◆ Start and continue with Aspirin (ASA) 75-325mg unless contraindicated. *The evidence that ASA and other antiplatelet therapy can reduce risk is compelling and suggests a role for platelet hyperaggregability.*	**Improved Metabolic Risk Factors**
Diabetes **1, 2, 3, 4, 6, 10, 11, 12**	Diabetes is regarded as a CHD risk equivalent with or without the presence of clinical atherosclerotic disease[3, 4].	**Recommendations** ◆ Encourage weight loss/maintenance. ◆ Medical nutrition therapy and diabetes education. ◆ Promote and/or increase daily physical activity.	**Therapy Options:** ◆ **Single therapy options**: Insulin secretagogues, biguanides, thiazolidinediones (TZD's), alpha glucosidase inhibitors, Insulin, as dictated by A1C. ◆ **Combination Therapy**: as dictated by A1C. Add oral agent(s) and/or insulin. Substitute or intensify insulin regime as needed. **Additional Considerations for Treatment/Monitoring**: ◆ Lowering blood pressure[4]. ◆ Managing dyslipidemia [3]. ◆ ASA or other antiplatelet agent. ◆ Monitor kidney function with albumin/creatinine ratio[11].	**A1C < 7.0%** **Blood Pressure: < 130/ < 80 mm Hg** **Lipids in Desired Range**
Obesity **1, 2, 4, 6, 9, 10**	◆ **Overweight:** BMI ≥ 25 - 29.9 kg/m^2 ◆ **Stage I Obesity:** BMI ≥ 30 - 34.9 kg/m^2 ◆ **Stage II Obesity** BMI ≥ 35-39.9 kg/m^2 ◆ **Stage III Obesity:** BMI ≥ 40 kg/m^2	**Recommendations** ◆ Encourage weight loss/maintenance. ◆ Medical nutrition therapy and/or other education as indicated. ◆ Promote and/or increase daily physical activity.	**Therapy Options:** ◆ Measure height and weight. ◆ Calculate BMI: BMI = kg/m^2 or wt. in pounds x 704.5 ÷ ht. in inches^2. ◆ Assess for impaired fasting glucose: fasting plasma glucose (FPG) ≥ 100 - < 126 mg/dL. ◆ **Assess for comorbidities and treat**. ◆ Assess for other associated diseases: gynecological abnormalities, osteoarthritis, gallstones.	**Weight loss: 5-7% of body weight or BMI of < 25 kg/m^2**
Physical Inactivity **1, 2, 3, 6, 4, 10**	◆ Inactivity is defined as: < 30 minutes of moderate physical activity 5 times or more per week.	**Recommendations** ◆ Promote and/or increase daily physical activity.	**Therapy Options:** ◆ Evaluate for sedentary lifestyle and occupational level of activity. ◆ Promote physical activity. ◆ Prescribe appropriate activities and/or refer moderate to high-risk patients to medically supervised activity programs. ◆ Re-assess at every visit.	**At least 30 minutes of moderate physical activity daily.**
Tobacco Use **1, 2, 6**	◆ Cigarette smoking. ◆ Pipe smoking. ◆ Chewing tobacco. ◆ Environmental exposure.	**Recommendations** ◆ Tobacco cessation. ◆ Reduce environmental exposure.	**Therapy Options:** ◆ Assess history of tobacco use or environmental exposure. ◆ Provide information on smoking cessation programs. ◆ Encourage non-prescription and/or prescription cessation products. ◆ Refer for support/counseling, e.g., stress reduction, nutrition education. ◆ Re-assess every visit. ***Wisconsin Quit Line: 1-877-270-STOP (7867) (español: 1-877-2NO-FUME)***	**Tobacco Cessation**
Family History **3, 4, 6**	◆ First degree relative with early-onset atherosclerotic CVD, < 55 years in men and < 65 years in women.	**Recommendations** ◆ Medical nutrition therapy and/or other education as indicated. ◆ Promote and/or increase physical activity.	**Therapy Options:** ◆ Obtain family history of CVD and provide family counseling as appropriate. ◆ Evaluate for 10 year CVD risk[3]. ◆ **Treat modifiable risk factors**: hypertension, diabetes, dyslipidemia, metabolic syndrome, established coronary heart disease, sleep apnea.	**Lifestyle Changes** **Control of Modifiable Risk Factors**

*1. *AHA/ACC Guidelines for Preventing Heart Attack and Death in Patients With Atherosclerotic Cardiovascular Disease: 2001 Update.* **2.** *AHA Guidelines for Primary Prevention of Cardiovascular Disease and Stro 02 Update.* **3.** *ATP lll*, NIH Pub. # 02-5215, September 2002. **4.** *JNC 7*, NIH Pub # 03-5233, May 2003, cites diabetes as a CHD risk equivalent with or without the presence of clinical atherosclerotic disease. Triglyceride values exceeding 400mg/dL are generally considered too high to calculate LDL-C, but laboratory thresholds may vary. *ATP III*, pg. III-6. **6.** *AHA Evidence-Based Guidelines for Cardiovascular Disease evention in Women*, February 2004. **7.** Non-HDL cholesterol = total cholesterol minus HDL cholesterol. *ATP III*, pg. II-7. **8.** The presence of metabolic syndrome accentuates the risk accompanying elevated LDL olesterol. Modification of atherogenic dyslipidemia, hypertension and the prothrombotic state will reduce the risk for CHD. *ATP III*, pg. II-26. **9.** *NHLBI Practical Guide to Obesity*, Oct. 2000. **10.** *Physical Activity ndamental to Preventing Disease*, HHS, June 2002. **11.** *Essential Diabetes Mellitus Care Guidelines*, WI Diabetes Advisory Group, April 2001. **12.** *Medical Management of DM: The AACE System of Intensive Diabete lf-Management, 2002 Update*, Endocrine Practice, (Suppl. 1), January-February 2002. **13.** *Facts About the DASH Eating Plan,* NIH Pub # 03-4082, Updated May 2003. **14.** *AHA/NHLBI/ADA Conference Proceedings: inical Management of Metabolic Syndrome*, Circulation, January 2004.

PCP/Clinic Name

CARDIOVASCULAR RISK REDUCTION COMMUNICATION RECORD

Patient: Please complete section A for your health care provider when you go for your office visit. Ask your provider to complete Section B. If you use a Personal Heart Care Wallet Card or other means to keep track of the dates and results of your exams and a list of your current medications, take this information with you and show it to your health care provider.

Section A. PATIENT INFORMATION

Patient Name: _____ Date of Birth: _____

Patient Address: _____

Patient Telephone Number: (____) _____

Name of Specialist or Primary Care Provider (PCP): _____

PCP Address: _____

PCP Telephone Number: (____) _____ PCP Fax Number: (____) _____

Section B. Specialist/Primary Care Provider(PCP) – Results of Laboratory Tests & Recommendations

Test date:	Laboratory Test	Results	Treatment	Recommendations/Follow-up
	Total Cholesterol			
	LDL Level			
	HDL Level			
	Triglycerides			
	Glucose			
	C-Reactive Protein			
	A1C			

Other Treatment Recommendations:	
PCP/Specialist Name (Print):	
SIGNATURE – PCP/Specialist:	
Address:	
Telephone Number:	Fax Number:
Fax or mail this completed form to the patient's specialist(s) or Primary Care Provider.	
(Extra copies can be downloaded at: http://dhfs.wisconsin.gov/Health/cardiovascular/index.htm)	

Appendix B: Personal Heart Care Card

Personal Heart Care Record

Name:

Address:

Allergies:

Medications:

Health Care Recommendations:

FOLLOW-UP VISITS: DATE

- **Primary Care Physician**
- **Cardiologist**
- **Endocrinologist**
- **Dietician**
- **Other**

IMMUNIZATIONS RECORD	DATE
Pneumonia Vaccination (generally once)	
Flu Shot (once per year)	
Tetanus Vaccination (once every 10 years)	

Taking control of your heart's health can help you feel better and stay healthy. Moderate physical activity, appropriate nutrition, weight control, and cessation of smoking can help lower your lipids (blood fats). Lowering blood lipid is important to help you prevent heart disease and stroke.

Contact information:

Wisconsin Cardiovascular Health Program at 1-608-266-3483

Local Contact Information:

DPH 43016

Dept. of Health and Family Services, Division of Public Health

Keep track of your health information. Show this card to your health care provider at every visit. Write down your goals, and the dates and results of tests below. Here are guidelines for good cardiovascular health.

AT EACH VISIT

Weight/BMI - Goal _____

Date/ Baseline Value
Date/Value
Date/Value

Blood Pressure - Goal_____

Date/ Baseline Value
Date/Value
Date/Value

LABORATORY TESTS

Total Cholesterol (*Blood Fats) **- Goal < 200**

Date/ Baseline Value
Date/Value
Date/Value

HDL* (Good Cholesterol) **- Goal ≥40/Men ≥50/Women**

Date/ Baseline Value
Date/Value
Date/Value

LDL* (Bad Cholesterol) **- Goal < 100**

Date/ Baseline Value
Date/Value
Date/Value

Triglycerides* - Goal < 150

Date/Value

Urine Test (Microalbumin) **- Goal _____** test yearly

Date/Value

Long term Blood Glucose (A1C) and /or Fasting Glucose - Goal <7 every 3-6 months if diabetes

Date/ Baseline Value
Date/Value

Other:

Date/Value

LIFESTYLE MODIFICATIONS

Physical Activity - Moderate exercise Date

Activity level
Activity level

Smoking Cessation - Never smoked / Quit Date

Quit / Still Smoking / Cut Down
Quit / Still Smoking / Cut Down

Appendix C: Signs and Symptoms of Heart Attack and Stroke

National Heart Attack Alert Program

www.nhlbi.nih.gov/about/nhaap/index.htm

Heart Attack Warning Signs

Some heart attacks are sudden and intense – the "movie heart attack," where no one doubts what is happening. However, most heart attacks start slowly, with mild pain or discomfort. Often people affected are not sure what is wrong and wait too long before getting help. Here are signs that can mean a heart attack is happening:

- **Chest discomfort –** Most heart attacks involve discomfort in the center of the chest that lasts more than a few minutes, or that goes away and comes back. It can feel like uncomfortable pressure, squeezing, fullness or pain.
- **Discomfort in other areas of the upper body –** Symptoms can include pain or discomfort in one or both arms, the back, neck, jaw or stomach.
- **Shortness of breat**h – This feeling often comes along with chest discomfort. However, it can occur before the chest discomfort.
- **Other signs** – These may include breaking out in a cold sweat, nausea or lightheadedness.

If you or someone you are with has chest discomfort, especially with one or more of the other signs, do not wait longer than a few minutes (no more than 5) before calling for help. Call 911 and get to a hospital right away. Calling 911 is usually the fastest way to get lifesaving treatment. Emergency Medical Services (EMS) staff can begin treatment when they arrive – up to an hour sooner than if someone gets to the hospital by car. The staff members are also trained to revive someone whose heart has stopped. You will be treated faster in the hospital if you come by ambulance, too. If you cannot access the Emergency Medical Services (EMS), have someone drive you to the hospital right away. If you are the one having symptoms, do not drive yourself, unless you have no other option.

Stroke Warning Signs

The American Stroke Association says these are the warning signs of stroke:

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden, severe headache with no known cause

If you or someone with you has one or more of these signs, do not delay! Immediately call 911 or the emergency medical services (EMS) number so an ambulance (ideally with advanced life support) can be sent for you. Also, check the time so you will know when the first symptoms appeared. It is very important to take immediate action. If given within three hours of the start of symptoms, a clot-busting drug can reduce long-term disability for the most common type of stroke.

Source: **www.americanheart.org**

Appendix D: Strengthening the Chain of Survival

American Heart Association Position

In cardiovascular emergencies, every second counts. As emergency responders race to save the life of a cardiac arrest victim, a stroke victim, or someone suffering a heart attack, every moment that passes places that victim at greater risk of permanent disability or death. Cardiac emergencies often have the highest fatality rates of all emergency events simply because they demand some of the fastest response times. For this reason, the American Heart Association continues to work at the federal, state and local level to strengthen each link in the Chain of Survival (the Chain).

Background

The Chain specifies a series of critical steps that can help save lives during cardiovascular emergencies. The links in the Chain include early access – quickly calling the Emergency Medical Services (EMS) 911 system; early CPR – promptly giving cardiopulmonary resuscitation when needed; early defibrillation -- having proper equipment (automated external defibrillators) and being trained to use it when indicated; and early advanced cardiovascular care. The American Heart Association (AHA) continues to explore opportunities to strengthen the Chain of Survival through all levels of government, and will continue to work with our coalition partners in developing greater access to CPR and AED training programs to guarantee that lay responders are prepared for cardiovascular emergencies. The AHA will also explore:

- ensuring that transportation policies reflect the needs of the emergency care community.
- speeding the deployment of enhanced wireless and wire-line 911 telephone services.
- strengthening communication regarding EMS services across governmental bodies.
- a review of federal policies impeding emergency research and "informed consent" issues.
- other opportunities that evolve from our national focus on Homeland Security. The Association continues to collaborate with myriad organizations to these ends. We have joined forces with federal agencies, other non-profit organizations, healthcare organizations, professional associations, state and local leaders, the gamut of first-responder groups and other coalition partners in order to strengthen the Chain of Survival.

Facts/Statistics

- During a sudden cardiac arrest, every minute that passes without appropriate emergency response translates into an 8-10 % reduction in survival rates.
- In 1999, 190 million calls were placed to 911, and 50 million of those were made from wireless phones. Wireless calls to 911 are rising drastically every year.
- Close to a dozen federal agencies play a role in emergency response, yet a recent GAO report found very little cooperation between these efforts, partially regarding emergency response data.
- Liability concerns have driven a great deal of "emergency response" research overseas, and few research institutions are studying this critical field.

Source: **www.americanheart.org**

Appendix E: National and Regional Resources

Category	Resource	Contact information
Cardiovascular Disease Guidelines	**National Guidelines and Consensus Statements** American Heart Association and the American College of Cardiology publish several guidelines and consensus statements for prevention and treatment of cardiovascular disease. In addition, the American Heart Association and American Stroke Association offer the Get With The Guidelines℠ (GWTG) hospital based quality improvement program. The program is designed to empower the healthcare provider team to treat patients consistently with the most updated treatment guidelines.	Please see www.americanheart.org for information on the consensus statements or Get With The Guidelines. Below is a brief selection of some guidelines and statements.
	Regional Guideline Resources The Institute for Clinical Systems Improvement (ICSI), a collaboration of health care organizations, provides health care quality improvement services to 45 medical organizations, many of which serve people in Wisconsin. ICSI and its members identify and accelerate the implementation of best clinical practices. As part of the best practice review process, ICSI utilizes many of the resources stated below.	www.icsi.org
	Coronary Heart Disease Primary prevention of coronary heart disease: guidance from framingham: A statement for healthcare professionals From the American Heart Association task force on risk reduction. Grundy SM, et al. *Circulation* 1998;97:1876-1887. Preventing Heart Attack and Death in Patients with Coronary Disease. *Circulation* 1995; 92:2-4.	
	Primary Prevention of CVD and Stroke American Heart Association Guidelines for primary prevention of cardiovascular disease and stroke: 2002 update. Consensus panel guide to comprehensive risk reduction for adult patients without coronary or other atherosclerotic vascular diseases. Pearson TA, et al. *Circulation.* 2002; 106:388-391. American Heart Association guide for improving cardiovascular health at the community level. A statement for public health practitioners, healthcare providers, and health policy makers from the American Heart Association expert panel on population and prevention science. Pearson TA, et al. *Circulation.* 2003;107:645.	

Appendix E: National and Regional Resources

Category	Resource	Contact information
Cardiovascular Disease Guidelines continued	**Stroke Treatment** Primary prevention of ischemic stroke: a statement for healthcare professionals from the stroke council of the American Heart Association. Goldstein LB, et al. *Stroke*. 2001; 32:280-299. Guidelines for the early management of patients with ischemic Stroke: a scientific statement from the stroke council of the American Stroke Association. Adams HP, et al. *Stroke*. 2003;34:1056-1083.	
	Wisconsin Cardiovascular Risk Reduction Initiative Guidelines Cardiovascular Health Program	Mary Jo Brink, MS, RN, Program Coordinator Tel: (608) 266-3702 Fax: (608) 266-8925 brinkmj@dhfs.state.wi.us http://dhfs.wisconsin.gov/health/cardiovascular/
National Resources on Cardiovascular Disease	**Agency for Healthcare Research and Quality**	540 Gaither Road Rockville, MD 20850 Tel: (301) 427-1364 www.ahrq.gov
	American College of Cardiology Heart House	Heart House 9111 Old Georgetown Road Bethesda, MD 20814-1699 Tel: (800) 253-4636, ext. 694 or (301) 897-5400 www.acc.org
	American College of Sports Medicine	401 West Michigan Street Indianapolis, IN 46202-3233 Tel: (317) 637-9200 www.acsm.org
	American Heart Association	7320 Greenville Avenue Dallas, TX 75231 Tel: (800) 640-4640 Fax: (800) 242-8721 www.americanheart.org
	Centers for Disease Control and Prevention (CDC)	1600 Clifton Road Atlanta, GA 30333 Tel: (404) 639-3311 / Public Inquiries: (404) 639-3534 / (800) 311-3435 www.cdc.gov
	CDC - National Center for Chronic Disease Prevention and Health Promotion	www.cdc.gov/nccdphp/
	CDC - Division of Adult and Community Health	www.cdc.gov/nccdphp/dach/

Appendix E: National and Regional Resources

Category	Resource	Contact information
National Resources on Cardiovascular Disease continued	**CDC - Cardiovascular Health Branch**	www.cdc.gov/cvh Tel: (770) 488-2424CDC - State Heart Disease and Stroke Prevention Program www.cdc.gov/cvh/state_program/index.htm
	Healthy People 2010	Office of Disease Prevention and Health Promotion U.S. Department of Healthand Human Services Hubert H. Humphrey Building,Room 738G 200 Independence Avenue, SW. Washington, DC 20201 email: hp2010@osophs.dhhs.gov Fax (202) 205-9478 Web Site: www.healthypeople.gov
	Healthiest Wisconsin 2010: A Partnership Plan to Improve the Health of the Public	Cristina Caputo Wisconsin Division of Public Health caputcl@dhfs.state.wi.us (608) 267-9054 http://dhfs.wisconsin.gov/statehealthplan/index.htm
	Institute for Clinical Systems Improvement (ICSI)	8009 34th Avenue South, Suite 1200 Bloomington, MN 55425 Tel: (952) 814-7060 Fax: (952) 858-9675 www.icsi.org
	National Guideline Clearinghouse	www.guideline.gov
	National Heart, Lung, and Blood Institute (HNLBI)	P.O. Box 30105 Bethesda, MD 20824-0105 Tel: (301) 592-8573 www.nhlbi.nih.gov NHLBI - The Heart Truth: A National Awareness Campaign for Women About Heart Disease www.nhlbi.nih.gov/health/hearttruth/
	National Stroke Association (NSA)	9707 E. Easter Lane Englewood, CO 80112 Toll Free: (800) STROKES Tel: (303) 649-9299 www.stroke.org
	Community Preventive Services – Systematic Reviews and Evidence Based Recommendations	Community Branch/DPRAM/EPO/CDC Centers for Disease Control and Prevention 1600 Clifton Road, NE, Mailstop E-90 Atlanta, GA 30333 Tel: (404)-498-6180 Fax: (404)-498-6145 thecommunityguide.org
CVD Risk Factors — Cigarette Smoking	**American Cancer Society (ACS)**	1599 Clifton Road NE Atlanta, GA 30329-4251 Tel: (800) ACS-2345 or (404) 320-3333 www.cancer.org

Appendix E: National and Regional Resources

Category	Resource	Contact information
CVD Risk Factors — Cigarette Smoking continued	**CDC Office on Smoking and Health**	2945 Flowers Road South, Mailstop K67 Atlanta, GA 30341 Tel: (770) 488-1265, Fax: (770) 488-1157 Web Site: www.cdc.gov/tobacco
	Center for Tobacco Research and Intervention (CTRI)	1930 Monroe Street, Suite 200 Madison, WI 53711 Tel: 608-262-8673 www.ctri.wisc.edu
	Promising Practices in Chronic Disease Prevention and Control: A Public Health Framework for Action, 2003.	www.cdc.gov/nccdphp/promising_practices/index.htm
	Wsconsin Tobacco Control Program	Division of Public Health Box 2659 Madison WI 53701-2659 Tel: (608) 266-8526 Fax: (608) 266-8925 http://dhfs.wisconsin.gov/health/TobaccoControl/INDEX.HTM National Campaign for Tobacco Free Kids Tel: (202) 296-5469 or (800) 284-KIDS www.tobaccofreekids.org
	National Cancer Institute (NCI)	NCI Public Inquiries Office, Ste. 3036A 6116 Executive Boulevard, MSC8322 Bethesda, MD 20892-8322 Tel: (800) 4-CANCER www.nci.nih.gov/
	U.S. Preventive Services Task Force – Counseling: Tobacco Use	www.ahrq.gov/clinic/uspstf/uspstbac.htm
CVD Risk Factors — Diabetes Mellitus	**American Diabetes Association (ADA)**	1660 Duke Street Alexandria, VA 22314 Web Site: www.diabetes.org Tel: (800) DIABETES
	Wisconsin Diabetes Prevention and Control Program	Pat Zapp, Program Director Diabetes Prevention and Control Program Tel: (608) 261-6871 Fax: (608) 266-8925 zapppa@dhfs.state.wi.us http://dhfs.wisconsin.gov/health/diabetes/
	American Heart Association (AHA)	Diabetes and Cardiovascular Disease. A Statement for Healthcare Professionals from the American Heart Association. Grundy SM, et al. Circulation. 1999; 100:1134-1146.
	CDC Division of Diabetes Translation	www.cdc.gov/diabetes/index.htm

Appendix E: National and Regional Resources

Category	Resource	Contact information
CVD Risk Factors — Diabetes Mellitus continued	**National Diabetes Education Program**	One Diabetes Way Bethesda, MD 20814-9692 Telephone: (301) 496-3583 ndep.nih.gov
CVD Risk Factors — Diet And Nutrition	**American Dietetic Association (ADA)**	120 South Riverside Plaza, Suite 2000 Chicago, IL 60606-6995 Tel: (800) 877-1600 Web Site: www.eatright.org
	American Heart Association (AHA) American Heart Association dietary guidelines revision 2000: A statement for healthcare professionals from the nutrition committee of the American Heart Association. Krauss RM, et al. *Circulation.* 2000;102:2284.	
	CDC Division of Nutrition and Physical Activity	www.cdc.gov/nccdphp/dnpa
	National Heart, Blood and Lung Institute (NHBLI)	DASH Eating Plan www.nhlbi.nih.gov/health/public/heart/hbp/dash/index.htm
	(NHLBI) National Obesity Education Initiative	P.O. Box 30105 Bethesda, MD 20824-0105 Tel: (301) 251-1222 www.nhlbi.nih.gov/nhlbi/cardio/cardio.htm
	National Cancer Institute (NCI) 5 A Day Program	Division of Cancer Control and Population Sciences National Cancer Institute 6130 Executive Boulevard Executive Plaza North, Room 4055C Bethesda, MD 20892 Tel: (301) 496-8520 www.5aday.gov
CVD Risk Factors — High Blood Pressure	The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7)	www.nhlbi.nih.gov/guidelines/hypertension/
	NHLBI Guide to Lowering Blood Pressure	www.nhlbi.nih.gov/health/public/heart/hbp/hbp_low/index.htm
	NHLBI National Blood Pressure Education Program	www.nhlbi.nih.gov/about/nhbpep/
	U.S. Preventive Services Task Force: High Blood Pressure - Screening	www.ahrq.gov/clinic/uspstf/uspshype.htm

continued

Appendix E: National and Regional Resources

Category	Resource	Contact information
CVD Risk Factors — High Blood Cholesterol	**National Heart, Lung, and Blood Institute (NHLBI)** Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III)	www.nhlbi.nih.gov/guidelines/cholesterol/index.htm
	NHLBI - National Cholesterol Education Program (NCEP)	www.nhlbi.nih.gov/about/ncep/
	NHLBI - Recommendations Regarding Public Screening for Measuring Blood Cholesterol	www.nhlbi.nih.gov/guidelines/cholesterol/chol_scr.htm
	NHLBI - Lower Your Cholesterol (NHLBI)	www.nhlbi.nih.gov/health/public/heart/other/sp_chol.htm
CVD Risk Factors — Obesity/Overweight	**American Heart Association Guidelines for Weight Management Programs for Healthy Adults**	www.americanheart.org/presenter.jhtml?identifier=1226
	NHLBI Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults	www.nhlbi.nih.gov/guidelines/obesity/ob_home.htm
	Position of the American Dietetic Association: Weight Management J Am Diet Assoc. 2002;102:1145-1155	www.eatright.org/images/journal/0802/adar.pdf
	Position of the American Dietetic Association: Weight Management J Am Diet Assoc. 2002;102:1145-1155	www.eatright.org/images/journal/0802/adar.pdf
	The Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity	www.surgeongeneral.gov/topics/obesity/calltoaction/toc.htm
CVD Risk Factors — Physical Activity	**American Alliance for Health Physical Education and Dance**	1900 Association Dr. Reston, VA 20191-1598 Tel: (800) 213-7193
	Community Preventive Services – Evidence based recommendations for lifestyle change	www.thecommunityguide.org
	Wisconsin Nutrition and Physical Activity Program	Mary Pesik, Program Coordinator Wisconsin Division of Public Health 1 West Wilson Street, Room 243 Madison, WI 53702 Tel: (608)-267-3694 pesikmj@dhfs.state.wi.us) http://dhfs.wisconsin.gov/Health/physicalactivity/

Appendix E: National and Regional Resources

Category	Resource	Contact information
CVD Risk Factors — Physical Activity continued	**American College of Sports Medicine (ACSM)**	www.acsm.org
	ACSM Guidelines for Healthy Aerobic Activity • Exercise 3 to 5 days each week • Warm up for 5 to 10 minutes before aerobic activity • Maintain your exercise intensity for 30 to 45 minutes • Gradually decrease the intensity of your workout, then stretch to cool down during the last 5 to 10 minutes • If weight loss is a major goal, participate in your aerobic activity at least 30 minutes for 5 days each week.	www.acsm.org/pdf/Guidelines.pdf
	American Heart Association (AHA) Exercise and physical activity in the prevention and treatment of atherosclerotic cardiovascular disease. A statement from the council on clinical cardiology (Subcommittee on Exercise, Rehabilitation, and Prevention) and the Council on Nutrition, Physical Activity, and Metabolism (Subcommittee on Physical Activity) Thompson PD, et al. *Circulation.* 2003 Jun 24;107(24):3109-16.	www.acsm.org
	CDC Physical Activity and Health: A Report of the Surgeon General	www.cdc.gov/nccdphp/sgr/sgr.htm
	National Association for Sport and Physical Education (NASPE) NASPE provides the leading physical activity recommendations for youth. Available reports include Physical Activity for Children: A Statement of Guidelines for Children Ages 5-12, and Moving Into The Future: National Standards for Physical Education.	www.aahperd.org/naspe/template.cfm
CVD Programs in Wisconsin Note: Please refer to the hospitals and health care organizations in your area for a more complete listing of programs designed to improve cardiovascular health.	**Healthy Lifestyles, Marshfield, WI**	1000 N. Oak Avenue Marshfield, WI 54449-5777 715-221-8400 www.marshfieldhealthylifestyles.org
	Fit City Madison	City of Madison 210 Martin Luther King Jr. Blvd. Rm. 403 Madison, WI. 53710 Tel: (608) 266-4611 Fax: (608) 267-8671 www.fitcitymadison.com
	Heart Healthy Waukesha County	Herb Rosenberger (co-chair) Tel: (262)-928-0708 Bob Speer (co-chair) Tel: (414)-456-2366 www.wtc.edu/waukesha/who.htm
	Theda Care	Community Initiatives John Mielke, M.D. Tel: (920)-734-6228 www.thedacare.org

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